REPORT OF ALBERTA'S ENDANGERED SPECIES CONSERVATION COMMITTEE

JUNE 2006

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CONTACT:

Information Centre – Publications
Alberta Sustainable Resource Development
Main Floor, Great West Life Building
9920 - 108 Street
Edmonton, Alberta
Canada T5K 2M4
Telephone: (780) 944-0313 or 1-877-944-0313

WRITING/EDITING: Robin Gutsell, Lisa Matthias, Kelley Kissner

GRAPHIC DESIGN & LAYOUT: Broken Arrow Solutions Incorporated

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Message from the Minister

HON. TED MORTON
MINISTER OF SUSTAINABLE RESOURCE DEVELOPMENT

Our province is home to a wonderful variety of wildlife, from familiar vertebrate species, to lesser known invertebrate, plant, fungi, and lichen species. Populations of these wild species help to indicate the health of the environment, and their present and future well-being is important to many Albertans.

As the new Minister of Alberta Sustainable Resource Development, I recognize the importance of balancing the economic values in Alberta with the needs of vulnerable species on the landscape.

The Endangered Species Conservation Committee (ESCC) brings together scientific expertise and the knowledge of people who own, manage, or use the land on which wild species depend, to effectively plan for the management of species at risk. This blending of science and stakeholder concerns has consistently provided coherent, balanced, and workable recommendations to the Government of Alberta.

I commend the committee and scientific subcommittee members for their dedication to the identification, conservation, and recovery of species at risk in Alberta. This progress report describes how, over the past two years, the committee has continued ongoing assessments of species potentially at risk in Alberta and made considerable advances in recovery planning for threatened and endangered species. One of the many achievements of the committee was reviewing and facilitating public input into 11 provincial recovery plans.

The successful implementation of the *Maintenance and Recovery Plan for Western Blue Flag* was a significant accomplishment, which resulted in the down-listing of the species in 2005. As a result of recovery efforts that involved cooperation among stakeholders, the western blue flag is no longer considered to be threatened in Alberta. The voluntary stewardship efforts for this and other species highlighted in this report demonstrate that all Albertans can contribute to the conservation of species at risk. The ESCC was instrumental in providing initial conservation recommendations for western blue flag management, in reviewing its recovery plan, and in updating the species' status.

I would like to recognize the role that Ivan Strang, MLA, West Yellowhead, has played as the Chair of the ESCC since the inception of the committee in 1998. Mr. Strang has done an exceptional job in working with scientists and stakeholders to provide the best possible advice on species at risk issues in Alberta.

I look forward to working with this committee toward the conservation and protection of Alberta's species at risk.

TED MORTON

"...I recognize the importance of balancing the economic values in Alberta with the needs of vulnerable species on the landscape."

MIKE CARDINAL
MLA ATHABASCA-REDWATER

Message from the Chair

As the new chairperson for Alberta's Endangered Species Conservation Committee I am pleased to introduce this fourth progress report highlighting the actions of this committee over the past two years. I have followed the good efforts of the ESCC for a number of years and it is an honour to be associated with this hardworking group.

I sincerely appreciate the consistent and coherent approach that the committee has established in identifying the status of species at risk and providing effective solutions for species protection and recovery. The accounts in this report show how committed the members of the ESCC and its Scientific Subcommittee are to their roles.

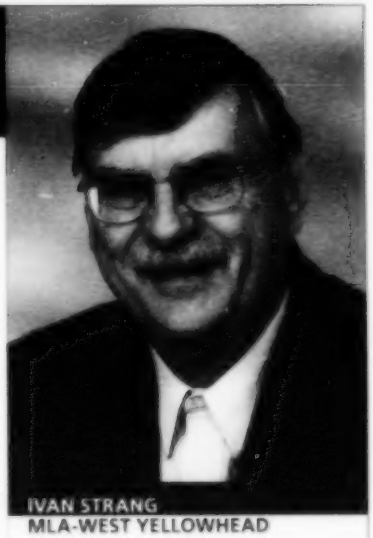
Mr. Ivan Strang, MLA West Yellowhead, has demonstrated impressive dedication and leadership during his tenure as chair of this committee. I hope to follow in those footsteps to work together with the ESCC to provide the Minister of Sustainable Resource Development with valuable and practical advice on species in Alberta.

I look forward to working with committee and Scientific Subcommittee members in addressing new species at risk priorities for Alberta, and contributing to recovery planning for species already considered to be at risk in the province.

MIKE CARDINAL

"I sincerely appreciate the consistent and coherent approach that the committee has established in identifying the status of species at risk and providing effective solutions for species protection and recovery."

Message from the Previous Chair



IVAN STRANG
MLA-WEST YELLOWHEAD

It has been a privilege to work with the diverse membership of the Endangered Species Conservation Committee (ESCC) toward the identification and recovery of species at risk in Alberta over the past nine years. This fourth progress report on the committee's activities is one way in which we can be accountable to Albertans for our efforts on their behalf.

It's very satisfying to help build something and watch it stand the test of time. As a result of start-up funding for a number of species at risk initiatives between 2000 and 2002, the department established a strong framework for its species at risk programming. This framework has enabled the committee to make a good number of recommendations and make headway in the recovery of species.

I am pleased to highlight the successful down-listing of western blue flag in 2005, in which this committee played an integral part. This and other success stories are described herein.

The Alberta approach for assessing the status of species adapts, for use at a regional level, the criteria used at national and international (World Conservation Union) levels. Based on these criteria, the Scientific Subcommittee supports the ESCC with independent, scientific assessments of a high calibre. Then the ESCC, as a stakeholder committee unique in all of Canada, takes these assessments and adds value. We then submit our recommendations to the Minister of Sustainable Resource Development.

I would like to introduce the new Chair for the ESCC, Mike Cardinal, MLA for Athabasca-Redwater. Mr. Cardinal is knowledgeable about the committee's past work, and I wish him and the committee success in fulfilling their mandate as they address further species.

My thanks go to the hard-working committee members and Scientific Subcommittee members. Your commitment to this task of bettering the condition of Alberta's at risk species is unwavering. Albertans and the species themselves are well served by your efforts.

IVAN STRANG

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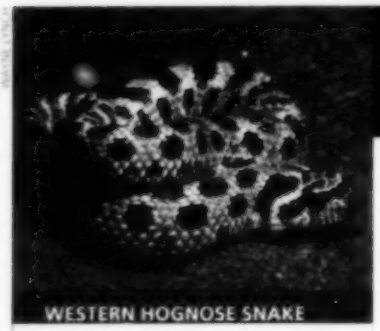


WESTERN HOGNOSE SNAKE

Alberta and Its Species at Risk

Alberta has a rich natural heritage. The province has hundreds of species of vertebrate animals, and thousands of species of plants and invertebrates, whose populations are healthy and stable. However, the populations of some wild species have declined to such an extent that they can no longer sustain themselves. Other species are in danger of reaching this point.

In response, the Alberta government has developed a process to prevent species at risk from becoming extinct or extirpated. The approach is innovative and practical, and brings broad social and economic values into the process. It is also cooperative and collaborative, with the solid backing of provincial legislation (the *Wildlife Act*). The process relies on sound science plus a realistic understanding of land use and land management, both of which are needed for the effective management and recovery of species at risk.

The Alberta approach relies upon the activities of the Endangered Species Conservation Committee (ESCC) and its scientific arm, the Scientific Subcommittee, both created under the auspices of the *Wildlife Act* in 1998.

The main role of the ESCC is to advise the Minister of Sustainable Resource Development on matters related to the identification, conservation and recovery of species at risk in Alberta. The Policy Statement of the ESCC is provided in Appendix 1. The specific functions of the ESCC are as follows:

- to recommend the necessary legal designation and protections for threatened and endangered species in Alberta;
- to facilitate the planning and implementation of conservation programs and recovery plans for species at risk; and
- to recommend actions that will prevent species from becoming at risk in the future.

The Scientific Subcommittee is an independent subcommittee of the ESCC. Its purpose is to study the scientific information available on species identified as being potentially at risk in Alberta. The Scientific Subcommittee provides the ESCC with its analysis of the biological status of a wild species and recommends an appropriate status designation. The Scientific Subcommittee may also suggest immediate actions that need to be taken to protect the species. The ESCC considers and includes the subcommittee's assessment when it submits its advice to the Minister of Sustainable Resource Development.

Definitions Used by the Endangered Species Conservation Committee

Species at Risk: A species at risk of extinction or extirpation (endangered or threatened), or a species that needs special management attention to prevent it from becoming at risk.

Extinct: A species that no longer exists.

Extirpated: A species no longer existing in the wild in Alberta but occurring elsewhere in the wild.

Endangered: A species facing imminent extirpation or extinction.

Threatened: A species likely to become endangered if limiting factors are not reversed.

Species of Special Concern: A species with characteristics that make it particularly sensitive to human activities or natural events.

Data Deficient: A species for which there is insufficient scientific information to support status designation.

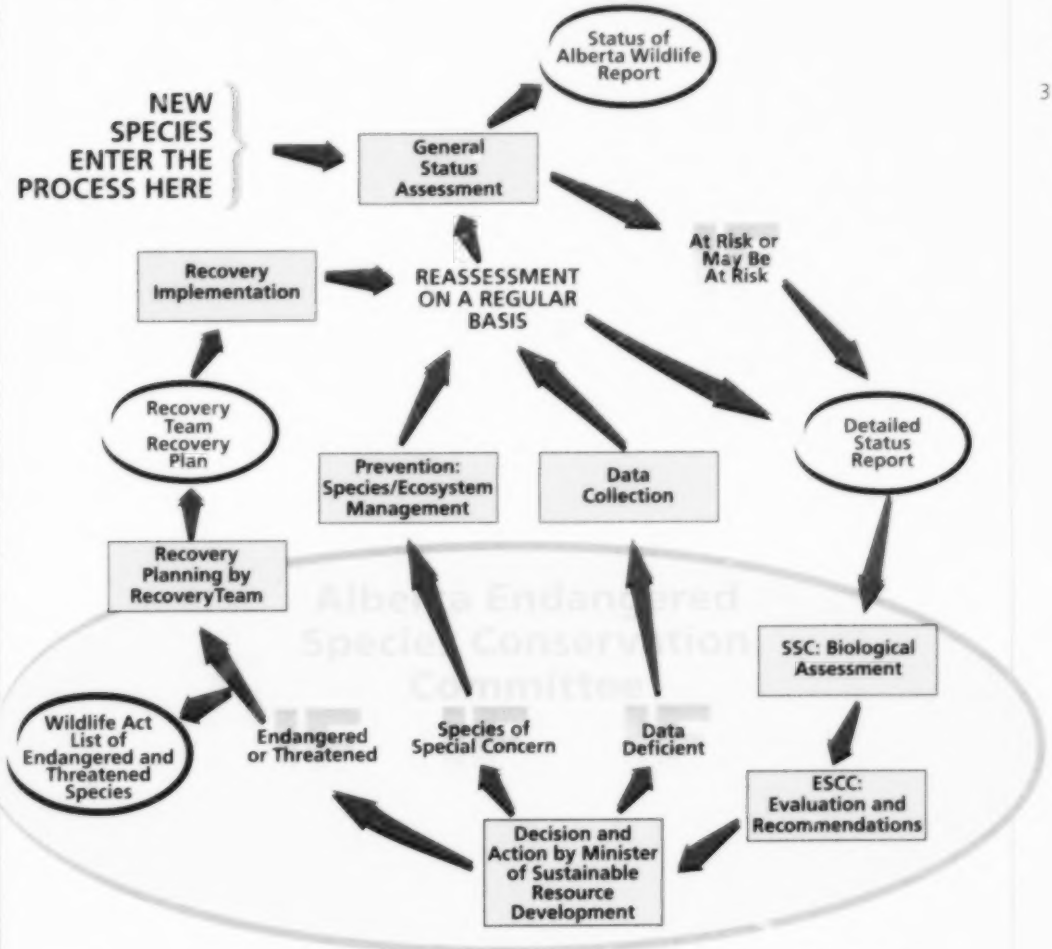
These definitions are based on those used by The Committee on the Status of Endangered Wildlife in Canada (COSEWIC - see page 11). For more information see the COSEWIC website <http://www.cosewic.gc.ca>.

Alberta's Strategy to Protect Species at Risk

NORTHERN LEOPARD FROG

The Endangered Species Conservation Committee (ESCC) is part of an overall process of wild species conservation in Alberta that incorporates both provincial and national goals and strategies.

In Alberta, those species potentially at risk of extinction or extirpation are first identified through a process managed by the Fish and Wildlife Division (Alberta Sustainable Resource Development), which ranks the general status of each Alberta species. The purpose of this "coarse filter" process is to assign initial priorities for detailed species assessment, data collection and species management. The Fish and Wildlife Division publishes reports on the general status of Alberta wildlife every five years. The General Status of Alberta Wild Species 2005 is available online (see the box on the following page for how to access this report). This searchable database contains assessments for 2 811 species, including birds, mammals, amphibians, reptiles, fish, butterflies, odonates (e.g., dragonflies), gastropods (e.g., snails),


Status of Alberta Wildlife Report
NEW SPECIES ENTER THE PROCESS HERE
General Status Assessment
At Risk or May Be At Risk
Recovery Implementation
REASSESSMENT ON A REGULAR BASIS
Recovery Team Recovery Plan
Prevention: Species/Ecosystem Management
Data Collection
Detailed Status Report
Recovery Planning by RecoveryTeam
SSC: Biological Assessment
Wildlife Act List of Endangered and Threatened Species
Endangered or Threatened
Species of Special Concern
Data Deficient
ESCC: Evaluation and Recommendations
Decision and Action by Minister of Sustainable Resource Development
Process
Outcome or Publication
Decision Point
ESCC = Alberta's Endangered Species Conservation Committee
SSC = Scientific Subcommittee
Species that go through the detailed status process and are found to be "Not At Risk" are identified for general management and regular general status assessment

Initial Conservation Action Statements: What They Contain

1. A species description.
2. Alberta status (and rationale for status rating) as assessed by the Scientific Subcommittee of the ESCC.
3. Initial conservation responses recommended by the ESCC, including
   - legal designation recommended by the ESCC and a brief statement of the rationale; and
   - action and resources needed for conservation efforts.

Protection for Endangered and Threatened Species[1] Under Alberta's *Wildlife Act*

1. Provides protection to nests and dens of both threatened and endangered species throughout the year.
2. Provides penalties for killing or trafficking in endangered and threatened species (up to $100 000 fine and/or two years in jail).
3. Designated non-game species also receive some specific protections.

[1] Currently, automatic protections apply only to non-fish vertebrates. To list plants, invertebrates and fish, similar protection must be specified by new regulations, which have been drafted and are under review.

bivalves (e.g., clams), and vascular plants. The next edition is to be completed in 2010.

If a species has been identified as being at risk, the Fish and Wildlife Division and Alberta Conservation Association jointly prepare a detailed Alberta Wildlife Status Report. Using this report, and any relevant additional information, the Scientific Subcommittee of the ESCC then assesses what the risk of extinction or extirpation is for that species in Alberta. In this process, the national Committee on the Status of Endangered Wildlife in Canada (COSEWIC) rating (see page 11) for the species is considered, but Alberta's assessment may differ because it focuses only on the status of the species within the province.

In making its assessment, the Scientific Subcommittee prepares a written evaluation, which is presented to the ESCC. The committee then decides what recommendations to make to the Minister of Sustainable Resource Development concerning the legal designation, management, and recovery of the species.

If a species is formally prescribed as endangered or threatened, which are legal designations under the *Wildlife Act*, the Minister of Sustainable Resource Development will prepare a recovery plan for the species. The role of the ESCC in the recovery process is as follows:

- to identify appropriate stakeholders to assist scientists in preparing the recovery plan;
- to review and provide advice on a draft plan; and
- to facilitate appropriate public review of, and input into, a recovery plan.

A document called an *Initial Conservation Action Statement* briefly summarizes the recommendations of the ESCC concerning actions that should be taken by Alberta to conserve a species, including immediate actions needed while a recovery plan is being put in place. By signing the federal/provincial/territorial *Accord for the Protection of Species at Risk* in 1996 (see page 11), Alberta committed to the prompt development of recovery plans—within one year from the time the species is officially designated as endangered and within two years for threatened species. The *Initial Conservation Action Statement* is ready to be implemented immediately upon approval by the Minister of Sustainable Resource Development.

In keeping with commitments made under the Accord, Alberta must also prevent species from becoming at risk. This preventative action is less costly than recovering endangered or threatened species. The ESCC also recommends management strategies to the Minister of Sustainable Resource Development that will prevent a species from becoming at risk. Assessed species that are not at immediate risk of extinction or extirpation, but still require special management and/or additional data collection have been identified as species of special concern or data deficient.

Where Alberta Species at Risk, Detailed and General Status Reports Are Available

Edmonton
Alberta Sustainable Resource Development
Fish and Wildlife Division
2nd Floor, Great West Life Building
9920 - 108 Street
Edmonton, Alberta, Canada T5K 2M4

Phone: (780) 427-5185
Fax: (780) 422-9557

OR

< http://srd.alberta.ca/fishwildlife/speciesatrisk/default.aspx >

Alberta's Endangered Species Conservation Committee

SWIFT FOX

Alberta's Endangered Species Conservation Committee (ESCC) held its first meeting in September 1998. Meeting two to three times per year, it makes decisions usually by consensus but can resolve matters using a two-thirds majority when consensus is not possible. The Minister of what was then Alberta Environmental Protection appointed Ivan Strang, MLA for West Yellowhead, as the committee's Chair in 1998. In 2007, the Minister of Alberta Sustainable Resource Development appointed Mike Cardinal, MLA for Athabasca-Redwater, as the committee's new Chair.

The Alberta approach to assisting species at risk involves using both scientific expertise and the knowledge of those who own, manage or use the land on which wild species depend. Therefore, the ESCC includes members of the scientific/academic community (apart from the Scientific Subcommittee), plus representatives of organizations that are land use managers, resource users, conservation groups and government departments. By including all of these stakeholders, the committee is better able to develop workable conservation management programs and recovery plans for species at risk.

The ESCC consists of the following individuals and organizations (member organizations are listed in alphabetical order):

Chair

Mike Cardinal, MLA for Athabasca-Redwater

Members

Alberta Association of Municipal Districts and Counties

Alberta Beef Producers

Alberta Conservation Association

Alberta Fish and Game Association

Alberta Forest Products Association (2 MEMBERS)

Alberta Irrigation Projects Association

Alberta Native Plant Council

Alberta Sustainable Resource Development

Calgary Zoo

Canadian Association of Petroleum Producers

Federation of Alberta Naturalists

Special Areas Board

The Wildlife Society - Alberta Chapter

Treaty 8 First Nations of Alberta

University of Alberta (Dept. of Biological Sciences)

University of Calgary (Dept. of Biological Sciences)

Western Stock Growers' Association

Ex-officio Representatives/Advisors

Alberta Agriculture, Food and Rural Development

Alberta Energy

Alberta Environment

Alberta Tourism, Parks, Recreation and Culture

Ex-officio Representatives do not vote. All other members have one vote.

For more information about these organizations, visit their websites, which are listed on the inside back cover.

Future Activities of Alberta's Endangered Species Conservation Committee

In the next two years Alberta's Endangered Species Conservation Committee intends to accomplish the following:

- continue ongoing assessments of species potentially at risk in Alberta and make its recommendations about these species to the Minister of Sustainable Resource Development;
- continue to facilitate the planning, review and implementation of recovery plans for endangered and threatened species;
- continue to review and facilitate public input into draft recovery plans; and
- provide input to regulatory changes needed to provide legal protections for endangered or threatened plants and fish.

Achievements of Alberta's Endangered Species Conservation Committee

Alberta's Endangered Species Conservation Committee has been meeting since September 1998 and has accomplished a great deal in its tenure. Between July 2004 and June 2006, it has achieved the following:

- received 10 of 11 new assessments carried out by the Scientific Subcommittee, including three re-assessments of species originally assessed five or more years ago (51 species have been evaluated by the ESCC since 1999);
- passed recommendations concerning the legal designation, management and recovery of all of these species to the Minister of Sustainable Resource Development (the Minister responded and initiated action on nine of these species);
- reviewed and facilitated public input into 11 draft recovery plans for 12 species, including one updated recovery plan.
- forwarded recommendations for the adoption and implementation of these 11 recovery plans to the Minister of Sustainable Resource Development (the Minister has responded to recommendations for each of these plans, and has approved nine of these plans and one in part).

SPECIES ASSESSED BY ALBERTA'S ENDANGERED SPECIES CONSERVATION COMMITTEE BETWEEN JULY 2004 AND JUNE 2006

ENDANGERED SPECIES

1 | Short-horned lizard *(Phrynosoma hernandesi)*
2 | Tiny Cryptanthe *(Cryptantha minima)*[1]
3 | Burrowing owl *(Athene cunicularia)*
4 | Ferruginous hawk *(Buteo regalis)*

THREATENED SPECIES

None

SPECIES OF SPECIAL CONCERN

1 | Barred owl *(Strix varia)*
2 | Western blue flag *(Iris missouriensis)*
3 | Arctic grayling *(Thymallus arcticus)*
4 | Weidemeyer's admiral *(Limenitis weidemeyerii)*
5 | Western grebe *(Aechmophorus occidentalis)* (RECOMMENDED STATUS SPECIES OF SPECIAL CONCERN)

DATA DEFICIENT SPECIES

1 | Slender mouse-ear cress *(Halimolobos virgata)*

IN PROCESS

1 | Sage thrasher *(Oreoscoptes montanus)*[2]

[1] New regulations for the protection of plant, fish and invertebrate species are being developed so that the listing process can be completed for these species.

[2] Evaluation on hold pending the collection of additional data to determine the species' native status in Alberta.

RECOVERY PLANS REVIEWED BY ALBERTA'S ENDANGERED SPECIES CONSERVATION COMMITTEE BETWEEN JULY 2004 AND JUNE 2006

Alberta Woodland Caribou Recovery Plan 2004/5 – 2013/14
Alberta Burrowing Owl Recovery Plan 2005
Alberta Greater Sage-Grouse Recovery Plan 2005-2010
Alberta Northern Leopard Frog Recovery Plan 2005-2010
Alberta Piping Plover Recovery Plan 2005-2010
Alberta Shortjaw Cisco Recovery Plan 2006-2011
Alberta Trumpeter Swan Recovery Plan 2005-2010
Draft Alberta Grizzly Bear Recovery Plan 2005-2010
Maintenance and Recovery Plan for Western Spiderwort in Alberta 2005-2010
Recovery Plan for Ord's Kangaroo Rat in Alberta 2005
Recovery Plan for Soapweed and Yucca Moth in Alberta 2006-2011

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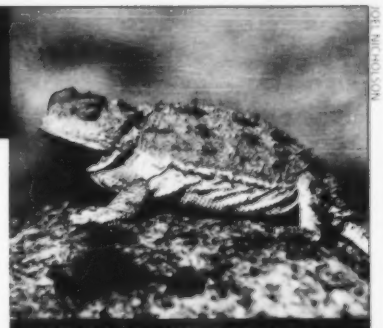
Recovery Plan for Soapweed and Yucca Moth in Alberta 2006-2011

The Scientific Subcommittee of Alberta's Endangered Species Conservation Committee



MOUNTAIN SHORT-HORNED LIZARD

The Scientific Subcommittee is made up of independent scientists who review the best scientific information available on a species that may be at risk in Alberta and assess what the biological status of that species is in the province. The subcommittee sends its assessment and related recommendations to the Endangered Species Conservation Committee.

The Scientific Subcommittee has adopted the species evaluation method used by the IUCN[1] (the World Conservation Union). This method is the same as that used by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) at the national level, and using it ensures that Alberta's assessments can be compared with those done nationally. As well, having an internationally accepted, open and transparent process of evaluation strengthens the credibility of the scientific assessments.

When evaluating a species, the Scientific Subcommittee considers a range of information about the species' status in Alberta. Population size, changes in population size, and the size of the area in which the species occurs are important factors. Other population characteristics, such as fragmentation, isolation and status in adjacent regions are also considered before the subcommittee recommends a status.

The Scientific Subcommittee is composed of a small group of scientists with significant expertise related to vertebrate animals (including mammals, amphibians, reptiles, birds and fish), invertebrates (including insects and spiders) and vascular and nonvascular plants, as well as in the general fields of biology, botany, ecology, forestry, population genetics, wildlife management and wildlife conservation.

The Scientific Subcommittee is made up of independent scientists who review the best scientific information available on a species that may be at risk in Alberta and assess what the biological status of that species is in the province.

Members of the Scientific Subcommittee (in alphabetical order) are as follows:

Dr. René J. Belland, (Subcommittee Chair) Director of Research, Devonian Botanic Garden, Edmonton, Alberta.

Dr. David Gummer, Curator of Mammalogy, Royal Albert Museum, Edmonton, Alberta.

Dr. Brett Purdy, Department of Renewable Resources, University of Alberta, Edmonton, Alberta.

Dr. Colleen Cassady St. Clair, Department of Biological Sciences, University of Alberta, Edmonton, Alberta.

Dr. John Spence, Professor, Department Chair, Department of Renewable Resources, University of Alberta, Edmonton, Alberta.

Mark Steinhilber, Head of Life Sciences, Royal Albert Museum, Edmonton, Alberta.

William D. Wishart, Retired Section Head, Wildlife Research, Alberta Fish and Wildlife; now Adjunct Professor, Department of Biological Sciences, University of Alberta, and Research Associate, Royal Alberta Museum, Edmonton, Alberta.

[1] The World Conservation Union has kept its former acronym—IUCN, which stood for International Union for the Conservation of Nature and Natural Resources.

Future Activities of the Scientific Subcommittee of Alberta's Endangered Species Conservation Committee

Over the next two years, the Scientific Subcommittee will be completing the following activities:

- continue to evaluate species potentially at risk in Alberta and pass on its recommendations to the Endangered Species Conservation Committee;
- continue to reassess and set priorities for reassessment of species as they approach five years since their initial assessment; and
- continue to review updates to guidelines for using IUCN Red List Categories and Criteria.

Achievements of the Scientific Subcommittee of Alberta's Endangered Species Conservation Committee

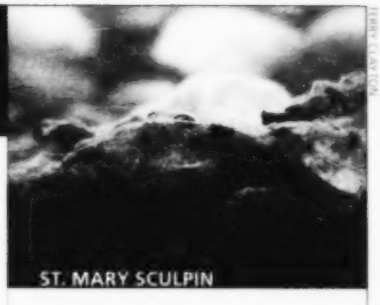
The Scientific Subcommittee has been meeting since January 1999. Between July 2004 and June 2006 it can be credited with the following accomplishments:

- evaluated nine new species (51 species have been evaluated since 1999) and provided its recommendations for these species to the Endangered Species Conservation Committee;
- re-evaluated the status of two species that had been initially evaluated five to six years previously;
- recommended priority species for new assessments, and priorities for reassessment of species approaching five years since their initial assessment; and
- reviewed the updates to guidelines for using IUCN Red List Categories and Criteria.

HABITAT FOR NORTHERN LEOPARD FROGS, PRINCESS SPRINGS, SOUTHERN ALBERTA

GORDON COURT

What Happens at the National Level


ST. MARY SCULPIN

There are two key cooperative processes that have driven endangered species conservation efforts nationally over the last few decades. One is the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), created in 1977. This committee, which includes government, academic and nonacademic experts, identifies wild species at risk in Canada.

In addition, the committee on the Recovery of Nationally Endangered Wildlife (RENEW) was created in 1988. This committee oversees the development and implementation of recovery plans for species identified as threatened or endangered nationally. Alberta participates on most national recovery teams for COSEWIC-designated species at risk that occur in the province.

The federal/provincial/territorial *Accord for the Protection of Species at Risk*, which Alberta signed in 1996, committed federal, provincial and territorial governments to increased cooperation and action on the conservation of species at risk. The formation of the Endangered Species Conservation Committee was one of the means by which Alberta began to meet its commitments under the Accord.

After several years under development, the *Species at Risk Act* (SARA) was proclaimed into law on June 5, 2003, with several provisions coming into effect on June 1, 2004.

Key components of this federal legislation include the following:

- National assessment by the COSEWIC and federal listing under the SARA (see below)
- Basic protections against killing, possession, trafficking, destruction of residences
- Critical habitat designation and protection
- Recovery planning and consultation (see below)
- Permitting of activities affecting a listed wildlife species, or its critical habitat or residence

With proclamation of the SARA, the COSEWIC was created in law, as an independent body of experts responsible for assessing and identifying species at risk. Assessments made by the COSEWIC are reported to the Federal Minister of the Environment and to the Canadian Endangered Species Conservation Council.

The federal government is required to prepare a recovery strategy and action plan(s) for each nationally endangered, threatened or extirpated species. Management plans must be developed for species of special concern. RENEW continues to guide the recovery process.

Alberta remains committed to a cooperative approach for species at risk conservation, which is the foundation for how the ESCC works. Since the SARA came into effect there has been important progress made in provincial/federal integration and collaboration for species at risk issues. The ESCC remains interested in seeing provincial and federal agencies continue to work together towards the identification and recovery of species at risk.

Some Helpful Websites

PROVINCIAL

Alberta's Species at Risk Program (INCLUDING REPORTS)
http://srd.alberta.ca/fishwildlife/speciesatrisk/default.aspx

Alberta Natural Heritage Information Centre
http://tprc.alberta.ca/parks/heritageinfocentre/default.aspx

NATIONAL

Federal *Species at Risk Act* (SARA)
http://www.sararegistry.gc.ca/default_e.cfm

Committee on the Status of Endangered Wildlife in Canada (COSEWIC)
http://www.cosewic.gc.ca

Accord for the Protection of Species at Risk
http://www.speciesatrisk.gc.ca/recovery/accord_e.cfm

Species at Risk in Canada
http://www.speciesatrisk.gc.ca/

INTERNATIONAL

World Conservation Union (IUCN)[1]
http://iucn.org/themes/ssc/index.htm

[1] The World Conservation Union has kept its former acronym— IUCN.

Species Currently Listed Under the *Wildlife Act*, and New Species Assessed by the Endangered Species Conservation Committee since its Inception in September 1998

Species	Former Designation	Recommendations SSC	Recommendations ESCC	Current Designation	Recovery Team Formed	Recovery/ Management Plan Drafted	Rec. Plan Approved by Minister
ENDANGERED							
Sage grouse (Centrocercus urophasianus)	GA	EN Jun-99	EN Jul-99	EN	Jan-03	Apr-05	Dec-05
Swift fox (Vulpes velox)	EN	EN Sep-99	EN Oct-99	EN	Jun-03	IP	
Piping plover (Charadrius melodus)	TH	EN Dec-99	EN Jan-00	EN	Jul-01	Feb-02 Oct-05[1]	Apr-02 Jun-06[1]
Ord's kangaroo rat (Dipodomys ordii)	NG	EN Mar-00	EN Apr-00	EN	Apr-03	Jan-05	Dec-05
Whooping crane (Grus americanus)	EN	EN Sep-01	EN Oct-01	EN	NA		
Bison (Bison bison)[2]	EN	EN Jan-04	EN Feb-04	EN			
Burrowing owl (Athene cunicularia)[3]	TH TH	TH Sep-99 EN Oct-05	TH Oct-99 EN Oct-05	 EN	Jun-01	Jan-05	Dec-05
Ferruginous hawk (Buteo regalis)[4]	TH EN	Sep-01 EN Jan-06	Oct-01 EN Mar-06	 EN	 IP		
Mountain plover (Charadrius montanus)	NG	EN Jan-04	EN Feb-04	EN			
Mountain Short-horned lizard (Phrynosoma hernandesi)	NG	EN Jan-06	Mar-06	EN	IP		
THREATENED							
Peregrine falcon (Falco peregrinus)	EN	TH Jun-99	TH Jul-99	TH	May-01	Jun-04	Sep-04
Woodland caribou (Rangifer tarandus caribou)	TH	TH Dec-00	TH Jan-01	TH	Oct-02	Jun-04	Jun-05[5]
Barren ground caribou (Rangifer tarandus groenlandicus)	TH	-	-	TH	NA		
Trumpeter swan (Cygnus buccinator)	TH	TH Apr-01	TH Jun-01	TH	Apr-03	Nov-05	May-06
Northern leopard frog (Rana pipiens)	TH	TH Sep-03	TH Nov-03	TH	Dec-04	Apr-05	Dec-05
OTHER FORMS OF PROTECTION PROPOSED (2000-2004)							
Sprague's pipit (Anthus spragueii)	NG	SC Jun-99	SC Jul-99	NG(SC)◆	NA	IP	
Long-toed salamander (Ambystoma macrodactylum)	NG	SC Dec-99	SC Jan-00	NG(SC)◆	NA	Apr-05	
Long-billed curlew (Numenius americanus)	NG	SC Mar-00	SC Apr-00	NG(SC)◆	NA	Apr-05	
Loggerhead shrike (Lanius ludovicianus)	NG	SC Mar-00	SC Apr-00	NG(SC)◆	NA		
Black-throated green warbler (Dendroica virens)	NG	SC Jun-00	SC Oct-00	NG(SC)◆	NA		
Harlequin duck (Histrionicus histrionicus)	GA	SC Sep-01	SC Oct-01	GA(SC)◆	NA	IP	
Bull trout (Salvelinus confluentus)	GF	SC Jan-02	SC Feb-02	GF(SC)◆	NA	IP	
White-winged scoter (Melanitta fusca deglandi)	GA	SC Sep-02	SC Oct-02	GA(SC)◆	NA		
Prairie falcon (Falco mexicanus)	BP	SC Jan-03	SC May-03	BP(SC)◆	NA		
Prairie rattlesnake (Crotalus viridis)	NG	DD Dec-99	DD Jan-00	NG(DD)◆	NA	IP	
Wolverine (Gulo gulo)	FB	DD Dec-00	DD Jan-01	FB(DD)◆	NA		
Pygmy whitefish (Prosopium coulteri)	-	DD Sep-00	DD Oct-00	DD	NA		
Great plains toad (Bufo cognatus)	NG	DD Dec-00	DD Jan-01	NG(DD)◆	NA		
Canadian toad (Bufo hemiophrys)	NG	DD Dec-00	DD Jan-01	NG(DD)◆	NA		
American badger (Taxidea taxus)	FB	DD Sep-02	DD Oct-02	FB(DD)◆	NA		
Red-tailed Chipmunk (Tamias ruficaudus)	NG	NA Jun-00	NA Oct-00	NG	NA		
Sage thrasher (Oreoscoptes montanus)	NG	DD Apr-05◆◆	-◆◆	NG(SC)◆	NA		
Barred owl (Strix varia)	BP	Jan-05	Mar-05	BP(SC)◆	NA		
Western grebe (Aechmophorus occidentalis)	NG	Jun-06	Jun-06	NG(SC)◆	NA	IP	
IN PROCESS (JUNE 2004) (E.G., AWAITING REGULATION DEVELOPMENT)							
Western spiderwort (Tradescantia occidentalis)	-	EN Apr-01	EN Jun-01	IP	Oct-03	May-05	Dec-05
Soapweed (Yucca glauca)	-	EN Apr-02	EN May-02	IP	Oct-03	Jan-06	May-06
Yucca Moth (Tegeticula yuccasella)	-	EN Apr-02	EN May-02	IP	Oct-03	Jan-06	May-06
Western blue flag (Iris missouriensis)	- -	TH Sep-99 SC Apr-05	TH Oct-99 SC Jun-05	 IP	Nov-01 NA	Feb-02	Apr-02
Grizzly bear (Ursus arctos)	GA	TH Jan-02	TH Feb-02	IP	Oct-02	Dec-04[6]	
Cape May warbler (Dendroica tigrina)	NG	SC Jun-00	SC Oct-00	IP			
Bay-breasted warbler (Dendroica castanea)	NG	SC Jun-00	SC Oct-00	IP			
Lake Sturgeon (Acipenser fulvescens)	GF	TH Jan-03	TH May-03	IP	IP		
Willow Flycatcher (Empidonax traillii)	NG	Sep-02	Oct-02	-◆◆			
Western silvery minnow (Hybognathus argyritis)	BF	TH Jan-03	TH May-03	IP	Mar-04	IP	
Shortjaw cisco (Coregonus zenithicus)	-	TH Jan-03	TH May-03	IP	Feb-05	Feb-06	[Jan-07]
Small-flowered sand-verbena (Tripterocalyx micranthus)	-	TH Sep-03	TH Nov-03	IP			
Banff Springs snail (Physella johnsoni)	-	EN Jan-04	EN Feb-04	IP	NA		
St. Mary sculpin (provisionally Cottus bairdi punctulatus)	-	TH Jan-04	TH Feb-04	IP	Mar-04	IP	
Stonecat (Noturus flavus)	-	TH Apr-04	TH Jun-04	IP	Mar-04	IP	
Tiny cryptanthe (Cryptantha minima)	-	EN Sep-04	EN Oct-04	IP	IP		
Slender mouse-ear-cress (Halimolobos virgata)	-	DD Apr-05	DD Jun-05	IP	NA		
Arctic grayling (Thymallus arcticus)	GF	SC Jan-06	SC Mar-06	IP	NA		
Weidemeyer's admiral (Limenitis weidemeyerii)	-	SC Jan-06	SC Mar-06	IP	NA		

EN – Endangered; **TH** – Threatened; **GA** – Game Animal; **NG** – Non-game Animal; **GF** – Game Fish (under Federal Fisheries Act); **BP** – Bird of Prey; **FB** - Fur-bearing Animal; **BF** – bait fish; **IP** – In Process; ◆ – Legal designation is Non-game Animal, Fur-bearing Animal, Game Bird or Game Fish, species further described as **SC** – Species of Special Concern or **DD** – Data Deficient; ◆◆ Evaluation deferred pending collection or analysis of additional data; **NA** – not applicable; [ ] – indicates events current as of the printing of this report.

[1] These dates refer to the updated recovery plan, *Alberta Piping Plover Recovery Plan 2005-2010*
[2] Currently, only bison that are found on the land within the boundaries described in Alberta's Wildlife Regulation are endangered animals.
[3] Burrowing owl was first assessed by the ESCC as threatened in Oct-99 and re-assessed as endangered in Oct-05.
[4] Ferruginous hawk was first assessed by the ESCC as threatened in Oct-01 and re-assessed as endangered in Mar-06.
[5] Recovery plan approved in part.
[6] The Minister acknowledged receipt of the grizzly bear recovery plan in December 2005.

Recovery Planning and Implementation

DRY SEED-LIKE FRUITS OF THE SMALL-FLOWERED SAND-VERBENA

One of the most important components of Alberta's Species at Risk Program is the development and implementation of recovery plans for species that are designated as threatened or endangered. Alberta recovery plans are prepared by recovery teams composed of a variety of stakeholders, often including representatives of government agencies, conservation organizations, industry, landowners, resource users, and universities.

Once a draft recovery plan is completed, it is submitted to the Director of the Wildlife Management Branch then forwarded to the Endangered Species Conservation Committee (ESCC) for review. The ESCC then provides recommendations and advice on implementation and recovery actions to the Minister of Sustainable Resource Development. After ministerial approval, a public information session is held. Public input is also provided through the recovery team and ESCC during plan development and review. Plans accepted and approved for implementation by the Minister are published as part of the recovery plan report series. Approval of a recovery plan is a departmental endorsement of the path of action necessary to restore and maintain the species in question.

As of June 2006, recovery plans had been completed for 14 species: burrowing owl, greater sage-grouse, grizzly bear, northern leopard frog, Ord's kangaroo rat, peregrine falcon, piping plover, shortjaw cisco, soapweed/yucca moth, trumpeter swan, western blue flag, western spiderwort, and woodland caribou. The ESCC reviewed and recommended adoption of all 13 completed plans. The Minister approved 11 of the 13 completed plans (all but grizzly bear, and woodland caribou in part), to guide the recovery programs for these species in Alberta.

Recovery planning and team formation has been initiated and is ongoing for four more species: swift fox, St. Mary sculpin, stonecat, and western silvery minnow. In addition, preliminary work has been undertaken for the formation of a recovery team for tiny cryptanthe and will be underway shortly for small-flowered sand-verbena. Recovery efforts are also underway either wholly or in part by the federal government for Banff Springs snail, bison, lake sturgeon, mountain plover, and whooping crane.

Many of these species are also listed nationally under the *Species at Risk Act*, and the responsible federal minister is required to prepare a recovery strategy and action plan(s) for each nationally endangered, threatened or extirpated species. Alberta remains committed to a cooperative approach for species at risk conservation. Since the *Species at Risk Act* came into effect there has been important progress made in provincial/federal integration and collaboration for species at risk issues, such as collaboration in recovery planning.

For more information, go to:

http://srd.alberta.ca/fishwildlife/speciesatrisk/default.aspx

and

http://srd.alberta.ca/fishwildlife/speciesatrisk/recovery.aspx

GORDON COURT

GREATER SAGE GROUSE

BURROWING OWL RECOVERY PLANNING

Recovery Team Lead: **Arlen Todd**

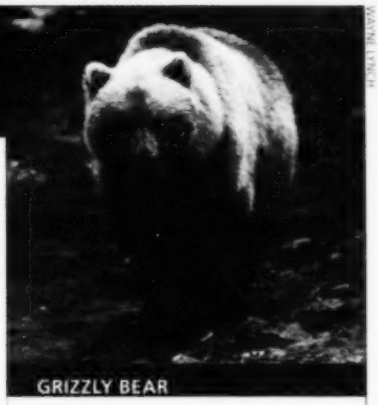
The burrowing owl (*Athene cunicularia*) has been protected as a threatened or endangered species under Alberta's *Wildlife Act* since 1987. In 1999 the ESCC re-evaluated the status and recommended it remain as threatened and that a provincial recovery team be initiated. The Alberta Burrowing Owl Recovery Team was formally established in June 2001. The team submitted a draft of *A Recovery Plan for Burrowing Owl in Alberta* to the Director of the Wildlife Management Branch and the ESCC for review in January 2005. The Minister approved the plan in December 2005. The ultimate goal of the plan is to restore the Alberta burrowing owl population to viable, naturally self-sustaining levels. The plan recognizes that landholders and resource users have vital roles to play in successful recovery efforts for burrowing owls. Recovery actions that are recently completed or ongoing include a habitat selection study, initiation of work to determine essential habitat, and ongoing effort to determine breeding distribution. The burrowing owl was re-assessed by the ESCC in 2005 (see page 32.)

GREATER SAGE-GROUSE RECOVERY PLANNING

Recovery Team Lead: **Dale Eslinger**

The ESCC recommended in 1999 that the greater sage-grouse (*Centrocercus urophasianus*) be designated as endangered in Alberta, and it has been protected under Alberta's *Wildlife Act* since 2000. The National Sage-Grouse Recovery Team was formed in November 1997 to initiate recovery planning for the prairie population of sage-grouse. Alberta endorsed the *Canadian Sage Grouse Recovery Strategy* in September 2001. The national plan has recently been updated. Local stakeholders were engaged in Alberta's recovery planning process through the formation of the Alberta Sage Grouse Recovery Action Group, which first convened in January 2003 to develop a recovery action plan for the province. A Technical Advisory Group was also formed, which consists of specialists who provide technical advice and scientific knowledge, develop models and recommend adaptive management experiments to the Recovery Action Group.

The *Alberta Greater Sage-Grouse Recovery Plan 2005-2010* was submitted to the Director of the Wildlife Management Branch and the ESCC for review in April 2005. The Minister approved the plan in December 2005. Implementation of recovery actions for this species are underway and include annual monitoring of grouse and leks, mapping of lands for protection and submission of protective notations to protect habitat around leks, voluntary land-use stewardship initiatives under the Multi-species Conservation Program for Species at Risk (MULTISAR), and development of a cumulative effects model that will help to provide a basis for integrated decision support for future land use management in relation to sage-grouse. Once the model is completed, it will be presented to the Recovery Action Group for consideration.


WAYNE LYNCH

GRIZZLY BEAR

GRIZZLY BEAR RECOVERY PLANNING

Recovery Team Lead: **Lisa Wilkinson**

In 2002 the ESCC recommended that the grizzly bear (*Ursus arctos*) be designated a threatened species in Alberta; however, the Minister delayed changing the designation of grizzly bear until his department assessed the ESCC's recommendations with regards to ending the hunting season for this species. In the meantime, however, the Alberta Grizzly Bear Recovery Team was initiated, in October 2002. The *Draft Alberta Grizzly Bear Recovery Plan 2005-2010* was submitted to the ESCC and the Director of the Wildlife Management Branch for review in December 2004. In 2005 the ESCC recommended to the Minister that the plan be approved. The Minister acknowledged receipt of the recovery plan, and stated that the department would require some time to fully review the management implications of the plan, and that he would ensure the committee was kept informed of the review and final decision. In March 2006, the grizzly bear hunting season was suspended pending results from a DNA census study.

NORTHERN LEOPARD FROG RECOVERY PLANNING

Recovery Team Lead: **Dave Prescott**

The northern leopard frog (*Rana pipiens*) has been protected as a threatened or endangered species under Alberta's *Wildlife Act* since 1987. In 2003 the ESCC re-evaluated the status, and recommended it remain as threatened, and that a provincial recovery team be initiated. The Alberta Northern Leopard Frog Recovery Team was formed in December 2004. In April 2005, the *Alberta Northern Leopard Frog Recovery Plan 2005-2010* was submitted to the ESCC and the Director of the Wildlife Management Branch for review. The Minister approved the plan in December 2005. The recovery plan focuses on the protection of existing populations from anthropogenic disturbances; the reintroduction of frogs to some sites within their historical range; monitoring the success of reintroductions; collection of additional data on population size, distribution, trends, reproduction, threats and habitat; and increased public awareness of leopard frogs and their conservation in Alberta. Implementation of recovery actions for leopard frogs is underway and has recently included a 2005 survey of all sites, development of a protocol for reintroductions, successful reintroductions conducted at some sites, habitat protection activities (e.g., protective notations and land use referrals), production and distribution of educational materials, identification of habitat and a GIS analysis of potential habitat, and collection of genetic samples to aid in reintroduction efforts.

GORDON COURT

PEREGRINE FALCON

ORD'S KANGAROO RAT RECOVERY PLANNING

Recovery Team Lead: **Arlen Todd**

The Ord's kangaroo rat (*Dipodomys ordii*) was designated as an endangered species in Alberta in 2000. The Ord's Kangaroo Rat Recovery Team held its first meeting in April 2003. In January 2005 the *Recovery Plan for Ord's Kangaroo Rat* in Alberta was submitted to the ESCC and the director of the Wildlife Management Branch for review. The Minister approved the plan in December 2005. Recovery activities implemented between 2004-2006 included the development of a long-term, annual population monitoring program; completion of initial research on the impact of threats to the population and its habitat; initiation of habitat restoration/mitigation research program; completion of preliminary models for essential habitat and population viability; a landscape change analysis of sand dune habitat within the range of kangaroo rats; and a comparative analysis of diets of kangaroo rats in anthropogenic and natural habitats.

PEREGRINE FALCON RECOVERY PLANNING AND IMPLEMENTATION

Recovery Team Lead: **Gordon Court**

The peregrine falcon (*Falco peregrinus*) has been protected as an endangered species under Alberta's *Wildlife Act* since 1987. In 1999 the ESCC recommended that the designation for the species be downgraded to threatened, as the species was on its way to recovery after over 25 years of conservation management. The ESCC also recommended formation of an Alberta Peregrine Falcon Recovery Team which was formed in May 2001. The *Alberta Peregrine Falcon Recovery Plan 2004-2010* was submitted to the ESCC and the Director of the Wildlife Management Branch for review in spring 2004. The Minister approved the recovery plan in September 2004. This plan continues to guide the recovery program for this species in Alberta.

The plan is an action-oriented document; however, it recognizes the realities of soliciting or committing Species at Risk funds toward a species regarded as "in recovery", particularly one that has been the focus of management activities for more than three decades. The plan emphasizes that large-scale management actions, such as re-introductions, are no longer needed, but that baseline monitoring should be in place to ensure that the small and still vulnerable population continues to grow in the province. Following the completion of each year's recovery plan activities, accomplishments will be assessed and future recovery direction and initiatives will be re-evaluated as deemed necessary by the recovery team.

Pesticide residues continue to be monitored in the species through opportunistic collections of eggs each year in Alberta. Also, a memorandum of agreement has been drawn up between Alberta Sustainable Resource Development, Parks Canada and the Canadian Wildlife Service to expedite monitoring initiatives in northeastern Alberta. These agencies, and the Alberta Conservation Association, completed a province-wide peregrine falcon survey in 2005.

ORD'S KANGAROO RAT

DAVID GUMMER. COURTESY OF THE ROYAL ALBERTA MUSEUM, EDMONTON, ALBERTA

PIPING PLOVER RECOVERY PLANNING AND IMPLEMENTATION

Recovery Team Lead: **Dave Prescott**

The piping plover (*Charadrius melodus*) has been protected as a threatened or endangered species under Alberta's *Wildlife Act* since 1987. In 2001, the ESCC re-evaluated the status, and recommended it be upgraded to endangered, and that a provincial recovery team be initiated. The Alberta Piping Plover Recovery Team was established in July 2001. In February 2002, the *Alberta Piping Plover Recovery Plan 2002-2004* was submitted to the ESCC and the Director of the Wildlife Management Branch for review. The plan was approved by the Minister in April 2002. All activities outlined in the plan were implemented, including the development of cooperative habitat stewardship agreements to reduce effects of grazing on plover habitat; placement of protective notations on public lands and use of the provincial industrial referral system to reduce industrial impacts on plover habitat; development of 30 lake management plans to guide management activities; production of signage; presentations, brochures, and information packages to increase awareness of piping plover conservation issues and encourage habitat conservation; expansion of a predator exclusion project to increase plover nest success and recruitment; enhanced population monitoring and banding programs; and attainment of financial and/or logistical support from a variety of individuals, government agencies, and non-government organizations to implement these activities. Importantly, these recovery initiatives resulted in two of the three recovery goals outlined in the plan being met or exceeded.

In 2005, an update to the initial two-year plan was drafted. The *Alberta Piping Plover Recovery Plan 2005-2010* was submitted to the ESCC and the Director of the Wildlife Management Branch for review in October 2005, and the Minister approved the plan in June 2006. The plan identifies similar conservation and recovery initiatives to those in the earlier version, including habitat stewardship and protection, population monitoring at existing sites and reintroductions to historical sites, predator exclusion programs, and educational outreach and extension activities.

SHORTJAW CISCO RECOVERY PLANNING

Recovery Team Leads: **Sue Cotterill/Larry Rhude**

The shortjaw cisco (*Coregonus zenithicus*) was designated as a threatened species in Alberta in 2003. The Alberta Shortjaw Cisco Recovery Team was formed in February 2005. The team submitted the *Alberta Shortjaw Cisco Recovery Plan 2005-2010* to the ESCC and the Director of the Wildlife Management Branch in February 2006. The ESCC reviewed the plan in June 2006. The Minister accepted the committee's recommendations and approved the plan in January 2007. The Minister directed the department to implement the plan in collaboration with partner organizations to guide the recovery of this species in Alberta. One of a number of recovery actions scheduled for the initial years of recovery implementation is to modify sportfishing regulations on Barrow lake to maintain its ecological integrity and further protect fisheries in the lake; these changes will take place after stakeholder consultation in 2007.

GORDON COURT

SOAPWEED FLOWER AND YUCCA MOTHS

SOAPWEED/YUCCA MOTH RECOVERY PLANNING

Recovery Team Lead: **Joel Nicholson**

Soapweed (*Yucca glauca*) and yucca moth (*Tegeticula yuccasella*) were designated as endangered species in Alberta in early 2003. The Alberta Soapweed/ Yucca Moth Recovery Team held its first meeting in October 2003. In January 2006, the *Recovery Plan for Soapweed and Yucca Moth in Alberta 2006-2011* was submitted to the ESCC and the Director of the Wildlife Management Branch for review. The Minister approved the plan in May 2006. Implementation of recovery actions for these species is underway and has recently included the development of a monitoring protocol, marking of individual soapweed plants, ungulate management, a draft of best management practices for habitat management, and the development of a species fact sheet. A translocation protocol and educational display are also in preparation.

TRUMPETER SWAN RECOVERY PLANNING

Recovery Team Lead: **Mark Heckbert**

The trumpeter swan (*Cygnus buccinator*) has been protected as a threatened or endangered species under Alberta's *Wildlife Act* since 1987. In 2001, the ESCC re-evaluated the status, and recommended it remain as threatened, and that a provincial recovery team be initiated. The Alberta Trumpeter Swan Recovery Team was initiated in April 2003. In November 2005, the *Alberta Trumpeter Swan Recovery Plan* was submitted to the ESCC and the Director of the Wildlife Management Branch for review. The Minister approved the plan in May 2006. The trumpeter swan's migratory nature and international life cycle requirements mean that the policies and actions of numerous governments and industries will to some extent affect the success of recovery efforts in Alberta. In 2005, the Alberta portion of the North American Trumpeter Swan Survey was completed.

WESTERN SPIDERWORT

WESTERN BLUE FLAG RECOVERY PLANNING AND IMPLEMENTATION

(Downlisted from threatened to a species of special concern Dec. 2005)

Recovery Team Lead: **Richard Quinlan**

The western blue flag (*Iris missouriensis*) was designated as a threatened species in 2000. The Alberta Western Blue Flag Recovery Team was officially formed in October 2001. In February 2002, the team submitted the *Maintenance and Recovery Plan for Western Blue Flag (*Iris missouriensis*) in Canada* to the ESCC and the Director of the Wildlife Management Branch for review and the plan was approved by the Minister in March 2002. The plan was designed to reflect co-operation and voluntary participation, stakeholder involvement in management decisions, protection of a threatened species in a sustainable ranching landscape, and landscape management to benefit multiple species within native grasslands.

Between 2001 and 2005, implementation activities overseen by the Western Blue Flag Conservation Program included population inventories, the development of nine habitat conservation strategies, and input into draft regulations for the legal protection of western blue flag in Alberta. Implementation of stewardship activities for western blue flag led to increased public interest and cooperation with the recovery program. As a result, information on previously unrecorded populations of this species was supplied to the recovery team, leading to a considerable increase in its known population size.

In June 2005, the ESCC re-evaluated the status of this species and recommended that its status be down-listed from threatened to a species of special concern. The Minister approved this designation in December 2005. The Western Blue Flag Conservation Program has now been incorporated into the Multi-species Conservation Program for Species at Risk (MULTISAR). Management activities for this species will focus on monitoring the population at its known locations and encouraging voluntary stewardship of this species and grassland habitat.

WESTERN SPIDERWORT RECOVERY PLANNING

Recovery Team Lead: **Joel Nicholson**

The western spiderwort (*Tradescantia occidentalis*) was designated as an endangered species in Alberta in 2001. The Alberta Western Spiderwort Recovery Team held its first meeting in October 2003. In May 2005, the *Maintenance and Recovery Plan for Western Spiderwort in Alberta 2005-2010* was submitted to the ESCC and the Director of the Wildlife Management Branch for review. The Minister approved the plan in December 2005. Implementation activities are underway and have included the development of a survey protocol, a population survey in 2005, the completion of a draft of best management practices, and initiation of genetics work to investigate the uniqueness of the Alberta population.

WAYNE LYNCH

WOODLAND CARIBOU

WOODLAND CARIBOU RECOVERY PLANNING

Recovery Team Lead: **Dave Hervieux**

The woodland caribou (*Rangifer tarandus caribou*) has been protected as a threatened or endangered species under Alberta's *Wildlife Act* since 1987. The ESCC re-evaluated the status of the species in 2001 and recommended that a provincial recovery team be formed. The Alberta Woodland Caribou Recovery Team was formed in the fall of 2002, and was composed of stakeholders affected by or concerned with the management of the species and its habitat. The *Alberta Woodland Caribou Recovery Plan* was submitted to the Director of the Wildlife Management Branch and the ESCC for review in June 2004. The Minister gave qualified approval to the plan in June 2005. The recovery plan details the actions and commitments necessary to conserve and restore woodland caribou populations in Alberta and to allow the species' removal from the list of provincially threatened species. Of primary importance in the plan is the underlying assumption that stakeholders who use and manage the land within caribou range are committed to the goal of caribou recovery. The plan also recognizes that effective recovery strategies must support the long-term sustainability of caribou herds. Implementation activities are underway and have recently included the creation of the Alberta Caribou Committee and a landscape planning team, initiation of activities to manage predators and prey, and population monitoring. The provincial recovery plan is now serving as template for the national boreal caribou recovery team.

SWIFT FOX

SWIFT FOX RECOVERY PLANNING

Recovery Team Lead: **Joel Nicholson**

The swift fox (*Vulpes velox*) has been protected as an endangered species under Alberta's *Wildlife Act* since 1987. In 2000, the ESCC re-evaluated the species and recommended the status remain as endangered. The Alberta Swift Fox Recovery Team was formed in 2004. The standard 12-month timeframe to complete a recovery plan for an endangered species in Alberta was extended for swift fox to allow completion of the co-operative national census in the winter of 2000-2001. Pending the development and implementation of a recovery plan, policy and management necessary to ensure the legislated protection of all swift fox dens was implemented. A draft of the recovery plan has been completed, and will be submitted to the ESCC and the Director of the Wildlife Management Branch for review.

ST. MARY SCULPIN/STONECAT/WESTERN SILVERY MINNOW RECOVERY PLANNING

Recovery Team Lead: **Terry Clayton**

The western silvery minnow (*Hybognathus argyritis*) was designated as a threatened species in 2003, and two other species inhabiting the Milk River system, the St. Mary sculpin (provisionally *Cottus bairdi punctulatus*) and stonecat (*Noturus flavus*), were designated as threatened species in 2004. The Alberta Western Silvery Minnow Recovery Team held its first meeting in March 2004. The ESCC recommended that the recovery plan address the needs of western silvery minnow at both the provincial and national levels; thus, the recovery planning for western silvery minnow in Alberta is a joint provincial/federal effort. A broad-based multi-species recovery approach is being developed to incorporate other fish species at risk in the Milk River Basin including St. Mary sculpin and stonecat; however, separate recovery plans will be written for each species. The recovery team is setting goals, objectives, strategies, and management actions needed to guide the recovery of these species over the next five years. The western silvery minnow draft recovery plan will be submitted to the Director of the Wildlife Management Branch and the ESCC for review in fall 2007.

GORDON COURT

MOUNTAIN PLOVER ON NEST

BANFF SPRINGS SNAIL RECOVERY PLANNING

Recovery Lead: **Dave Prescott**

The Banff Springs snail (*Physella johnsoni*) was designated as endangered in Alberta in 2004. This species is only found in one place in the world – the thermal springs on Sulphur Mountain in Banff National Park, Alberta. Therefore, recovery planning for this species has been carried out by the federal government. The national *Recovery Strategy for the Banff Springs Snail* (Physella johnsoni) *in Canada* (2007) is currently available on the *Species at Risk Act* Public Registry (http://www.sararegistry.gc.ca/default_e.cfm).

BISON RECOVERY PLANNING

Recovery Lead: **Matt Besko**

The bison (*Bison bison*) has been protected as an endangered species under Alberta's *Wildlife Act* since 1987. The endangered status applies within the boundaries in northwestern Alberta described under the Wildlife Regulations. The ESCC recommended in 2004 that all free-ranging bison be listed as endangered across the province. The Minister responded that the issue would require stakeholder consultation and that he would notify them of a final decision. Bison disease management needs to be resolved before moving ahead with provincial recovery planning; an Assistant Deputy Minister's Committee has been reviewing the disease issue in Alberta. A national recovery strategy has been drafted to comply with the Canadian *Species at Risk Act*, and will undergo jurisdictional review.

LAKE STURGEON RECOVERY PLANNING

Recovery Lead: **Terry Clayton**

The lake sturgeon (*Acipenser fulvescens*) was designated as a threatened species in Alberta in 2003, and this species is not currently harvested in Alberta. As of June 2006, the provincial recovery team for lake sturgeon had not yet been formed. A national recovery strategy will be developed and Alberta will contribute a provincial action plan under that strategy.

MOUNTAIN PLOVER RECOVERY PLANNING

Recovery Lead: **Dave Prescott**

The mountain plover (*Charadrius montanus*) was designated as an endangered species in Alberta in 2004, and has been protected under Alberta's *Wildlife Act* since 2006. The national *Recovery Strategy for the Mountain Plover in Canada* (2006) is currently available on the *Species at Risk Act* Public Registry (http://www.sararegistry.gc.ca/default_e.cfm). Provincial representatives will have input into the action plan for Alberta, to be developed under the national recovery strategy.

SMALL-FLOWERED SAND VERBENA

SMALL-FLOWERED SAND VERBENA RECOVERY PLANNING

Recovery Lead: **Joel Nicholson**

The small-flowered sand verbena (*Tripterocalyx micranthus*) was designated as a threatened species in Alberta in 2004. The provincial recovery team will be formed in 2007/2008 and the national recovery strategy is due in 2008. At the time of publication, Alberta Sustainable Resource Development was finalizing the placement of protective notations on all known occurrences of this species on Crown land.

TINY CRYPTANTHE RECOVERY PLANNING

Recovery Lead: **Joel Nicholson**

The tiny cryptanthe (*Cryptantha minima*) has been designated as an endangered species in Alberta since 2005. The provincial recovery team will be formed in 2007/2008 and the national recovery strategy was completed in 2006 and is available on the *Species at Risk Act* Public Registry. At the time of publication, Alberta Sustainable Resource Development was finalizing the placement of protective notations on all known occurrences of this species on Crown land.

WHOOPING CRANE RECOVERY PLANNING

Recovery Lead: **Lisa Wilkinson**

The whooping crane (*Grus americana*) has been protected as an endangered species under Alberta's *Wildlife Act* since 1987. Alberta participates on the national Whooping Crane Recovery Team. A draft of the recovery strategy was reviewed provincially, and the strategy is scheduled for posting on the *Species at Risk Act* Public Registry in 2007.

GORDON COURT

AMERICAN BADGER

Updates on Species Assessed as Special Concern and Data Deficient 1999 - 2006

The first three reports of Alberta's Endangered Species Conservation Committee presented information on 41 species. Since those reports, many of these species have entered the recovery process, and are reported on in the recovery section of this report (see pages 13-23). Amendments to the *Wildlife Act* have not yet been enacted to facilitate designations of species of special concern and data deficient. However, ESCC *Initial Conservation Action Statement* recommendations have been fully adopted as policy guidelines for all but two of these species; the Minister deferred designating Cape May warbler and bay-breasted warbler as species of special concern until he had a chance to review a recommended management approach by his department and forest industry stakeholders.

The following accounts describe progress made since 2004 on the species assessed as species of special concern and data deficient (up to June 2006): American badger, bay-breasted warbler, black-throated green warbler, bull trout, Canadian toad, Cape May warbler, Great Plains toad, harlequin duck, loggerhead shrike, long-billed curlew, long-toed salamander, prairie falcon, prairie rattlesnake, pygmy whitefish, Sprague's pipit, white-winged scoter, and wolverine.

AMERICAN BADGER [DATA DEFICIENT]

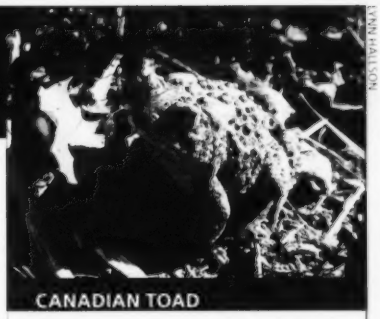
Management Lead: **Arlen Todd**

The ESCC's 2002 Initial Conservation Action Statement for American badger (*Taxidea taxus*) recommended that Alberta Sustainable Resource Development enhance programs to collect information on the population size, distribution, and trend of the American badger in Alberta. The ESCC also recommended that Alberta Sustainable Resource Development should secure sufficient new resources to collect better information on the population size, distribution, and trend of the American badger in Alberta. Some incidental progress has been made for this species in concert with other grassland conservation initiatives.

BAY-BREASTED WARBLER and CAPE MAY WARBLER [SPECIES OF SPECIAL CONCERN]

Management Lead: **Lisa Wilkinson**

The ESCC recommended a number of conservation steps in their 2002 Initial Conservation Action Statements for the bay-breasted warbler (*Dendroica castanea*) and Cape May warbler (*Dendroica tigrina*), including the development and implementation of conservation and management programs through co-operative partnerships with interested stakeholders, and conservation and management of the species' habitats. At the time of publication, neither of these warbler species has been formally designated as a species of special concern in Alberta. However, management plans are scheduled for completion in 2008.


CANADIAN TOAD

BLACK-THROATED GREEN WARBLER
[SPECIES OF SPECIAL CONCERN]
Management Lead: **Lisa Wilkinson**

The ESCC recommended a number of conservation steps in its 2000 Initial Conservation Action Statement for the black-throated green warbler (*Dendroica virens*), including the enhancement of programs to collect information on the population size, distribution, and trend of the black-throated green warbler in Alberta, and conservation and management of its habitat. A management plan for this species is scheduled for completion in 2007.

BULL TROUT [SPECIES OF SPECIAL CONCERN]
Management Leads: **Dave Walty/Dave Christiansen**

In 2002 the ESCC recommended several conservation steps for bull trout (*Salvelinus confluentus*), including the development of a conservation and management strategy. The bull trout has had a zero bag limit since 1995 in an attempt to recover many populations that had declined significantly. Fisheries biologists are currently updating the monitoring protocol for bull trout, and a conservation and management strategy is scheduled for completion in 2007. The status report for bull trout will be updated in 2007-2008.

CANADIAN TOAD [DATA DEFICIENT]
Management Leads: **Arlen Todd/Lisa Wilkinson**

In their 2001 Initial Conservation Action Statement for Canadian toad (*Bufo hemiophrys*) the ESCC recommended that Alberta Sustainable Resource Development facilitate and catalyze collection of better information on the population size, distribution and trend of the Canadian toad in Alberta, leading to a status re-assessment. Two provincial amphibian monitoring projects have been carried out in Alberta in recent years. The Researching Amphibian Numbers in Alberta (RANA) program was initiated in 1997 to monitor amphibian populations in several locations across the province. Unfortunately, funding was not available to continue this program into 2007. A second, volunteer-based project coordinated under the Alberta Amphibian Monitoring Program (AAMP) has performed province-wide surveys since 1992. However, Canadian toad observations have been scarce. Because of concerns that the population is declining in central Alberta, a project to compile existing data for this species was initiated in 2007, and a status re-assessment will likely follow.

WAYNE LYNCH

GREAT PLAINS TOAD

GREAT PLAINS TOAD [DATA DEFICIENT]

Management Lead: **Arlen Todd**

In its 2001 Initial Conservation Action Statement for great plains toad (*Bufo cognatus*) the ESCC recommended that A!berta Sustainable Resource Development secure new resources to collect reliable information on the population size, distribution, and trend of this species in Alberta. In 2002, roadside transects were developed in the Milk River Basin, following a major rainfall event in June of that year that resulted in emergence of great plains toad and breeding activity in several ephemeral wetlands in the Milk River Basin. These transects were surveyed in 2003 and 2005 following similar precipitation events.

In 2005, a sub-sample of the roadside transects was established (along with transects further west for plains spadefoot), as the prairie toad component of the Researching Amphibian Numbers in Alberta (RANA) program. Unfortunately, funding was not available to continue this program into 2007. This sub-sample of transects was re-surveyed in 2006 by Multi-species Conservation Program for Species at Risk (MULTISAR). The intent is to continue these surveys on years when major rainfall events occur. In addition, a volunteer-based project coordinated under the Alberta Amphibian Monitoring Program (AAMP) has performed province-wide surveys since 1992.

HARLEQUIN DUCK [DATA DEFICIENT]

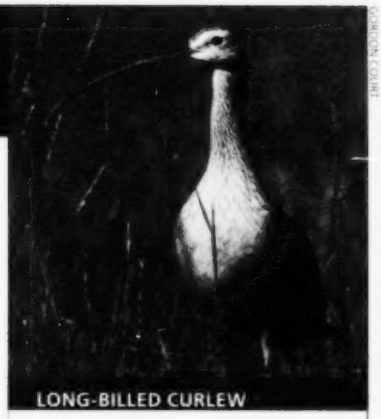
Management Lead: **Lisa Wilkinson**

In its 2002 recommendations for harlequin duck (*Histrionicus histrionicus*), the ESCC stated that Alberta Sustainable Resource Development should develop and implement a conservation and management strategy for the species in coordination with other agencies, and that active conservation and management of harlequin duck habitat is needed. Currently, annual monitoring occurs in some watersheds. For example, Alberta Fish and Wildlife Division carries out annual trend surveys in the Oldman River Basin. A management plan for harlequin duck in Alberta has been drafted and is scheduled for completion in 2007.

LOGGERHEAD SHRIKE [SPECIES OF SPECIAL CONCERN]

Management Lead: **Arlen Todd**

The loggerhead shrike (*Lanius ludovicianus*) was designated a species of special concern in Alberta in 2000. Populations of loggerhead shrike have declined in many areas of North America in recent years. The COSEWIC (Committee on the Status of Endangered Wildlife in Canada) designated the species as endangered in the eastern portion of its distribution, and threatened in the west, and both are listed in Schedule 1 of the federal *Species at Risk Act*. In 2002-2003, new survey methods for loggerhead shrikes were evaluated and a province-wide population estimate was conducted. Generally, populations were reduced in the central part of the province, but higher in areas near Lethbridge, Medicine Hat, and the Parkland Natural Region. In 2003-2004, it was estimated that approximately 13 560 pairs occurred in Alberta, a higher, and more precise estimate than previously thought. Although this number is higher than expected, it is recommended that population size be verified, and that the species remain a species of special concern because of a known susceptibility to West Nile Virus. A prairie-wide survey of this species is conducted every five years; the last survey was conducted in 2003. A national recovery strategy and a provincial management plan will be developed.



LONG-BILLED CURLEW

LONG-BILLED CURLEW [SPECIES OF SPECIAL CONCERN]

Management Lead: **Richard Quinlan**

In 2000, the ESCC recommended that the long-billed curlew (*Numenius americanus*) be designated a species of special concern, and that the government enhance programs to collect information on the population size, distribution, and trend of this species in Alberta. Since that time, the long-billed curlew has been included in grassland inventory and conservation efforts such as those carried out by the Multi-species Conservation Program for Species at Risk (MULTISAR). In 2002, a provincial population inventory was carried out by Alberta Fish and Wildlife Division, which resulted in a population estimate of 24 000. Furthermore, Alberta participated in a continental inventory of long-billed curlews in 2004 and 2005. The survey results showed that long-billed curlews in Alberta comprise a considerable portion of the North American population. A management plan for the long-billed curlew has been drafted and the final plan is scheduled for completion in 2007.

LONG-TOED SALAMANDER [SPECIES OF SPECIAL CONCERN]

Management Lead: **Lisa Wilkinson**

In March 2000, the ESCC recommended the long-toed salamander (*Ambystoma macrodactylum*) be listed as a species of special concern. Within Alberta, the long-toed salamander has a limited breeding distribution, its sub-populations are isolated and discontinuous, and the species appears to be vulnerable to habitat disturbance. Threats to salamanders include fish stocking as well as disturbance of breeding ponds and adjacent forest habitat. It appears that long-toed salamander populations may be stable in remote and protected areas. Where human pressure on the landscape is increasing, salamander populations are isolated and vulnerable to habitat destruction. Monitoring of this species has been conducted as part of the Researching Amphibian Numbers in Alberta (RANA) program, which has been conducted annually in Alberta since 1995. (As of the printing of this report, RANA was discontinued in 2007.) The provincial conservation and management plan was completed in 2005 and is under review by the Fish and Wildlife Division.

ORD'S KANGAROO RAT HABITAT

GORDON COURT

PRAIRIE FALCON

PRAIRIE FALCON [SPECIES OF SPECIAL CONCERN]

Management Lead: **Gordon Court**

In 2003, the ESCC recommended that the prairie falcon (*Falco mexicanus*) be designated a species of special concern. Information on prairie falcon populations was gathered opportunistically during the provincial peregrine falcon survey in 2005, and though other grassland monitoring programs such as the Multi-species Conservation Program for Species at Risk (MULTISAR). Nest occupancy and success continues to be monitored annually at known aeries by licensed bird banders in Alberta. A provincial management plan for this species is scheduled for completion in 2008, and will address recommendations for monitoring and estimating population size.

PRAIRIE RATTLESNAKE [DATA DEFICIENT]

Management Lead: **Joel Nicholson**

The Alberta population of prairie rattlesnakes (*Crotalus viridis viridis*) may be in decline, but the extent of decline is not known. The species was designated as data deficient in 2000. A conservation management plan for this species was drafted in 2002-2003 with the goal of acquiring information on population size and trends of prairie rattlesnakes in Alberta. Key objectives include (1) intensive investigation of road mortality levels and development of specific management strategies to mitigate road mortality, (2) communication with landowners/leaseholders and industry about the conservation requirements of this species, (3) more accurate estimation of population size of rattlesnakes, and (4) education to increase public support for rattlesnakes. Standardized protocols for locating snake hibernacula have been developed. Annual counts of rattlesnakes continue at one or two hibernation sites during spring and fall when rattlesnakes aggregate at hibernacula; however, standardized protocols for counts have not yet been applied throughout this species' range.

During the summers of 2004 and 2005, researchers from the University of Calgary conducted a study on the movement behaviour of rattlesnakes. Results include information on when and where snakes are most likely to be affected by human land-use activities. These data can be used by provincial biologists and land managers to help mitigate effects of human activities on snakes. In 2004, signage was placed along several roadways in southern Alberta where snake activity is high to help reduce the number of mortalities associated with traffic. A study and Species at Risk report on the reproductive biology of female prairie rattlesnakes in Alberta will be completed in early 2007. Furthermore, there has been ongoing work on the peripheral rattlesnake population in Lethbridge, involving mitigation of urban impacts, relocations of snakes, habitat improvement, and research on movements and population levels by University of Lethbridge.

GORDON COURT

SPRAGUE'S PIPIT

PYGMY WHITEFISH [DATA DEFICIENT]

Management Lead: **Lisa Wilkinson**

The pygmy whitefish (*Crotalus viridis viridis*) was designated as data deficient in 2001. The ESCC recommended that Alberta Sustainable Resource Development implement basic protection for this species by investigating and implementing methods to prevent the accidental harvest of pygmy whitefish, and work with other stakeholders to collect information on the population size, distribution, and trend of this species in Alberta. Data are being collected opportunistically for this species.

SPRAGUE'S PIPIT [SPECIES OF SPECIAL CONCERN]

Management Lead: **Dave Prescott**

In July 1999, the ESCC recommended that Sprague's pipit (*Anthus spragueii*) be listed as a species of special concern. Sprague's pipit is listed as threatened under the federal *Species at Risk Act*. In 2002, a draft management plan was prepared for the province of Alberta, focusing on the maintenance of long term monitoring efforts, preserving and improving breeding habitat, and increasing public awareness. An updated management plan should be completed in 2007.

The Breeding Bird Survey and the Canadian Wildlife Service monitor distribution and population trends of Sprague's pipit in Alberta, and elsewhere within its range. Many of these studies have documented habitat use, confirming the species' strong preference for native grasslands that are lightly grazed. The 2002 long-billed curlew survey also provided a population estimate for Sprague's pipit, of 11 400; however, this estimate has a fairly large confidence limit of +/- 40%.

WHITE-WINGED SCOTER [SPECIES OF SPECIAL CONCERN]

Management Lead: **Lisa Wilkinson**

The white-winged scoter (*Melanitta fusca deglandi*) was designated as a species of special concern in early 2003. There has been a long-term decline of this species in Alberta and across North America. Currently, the smaller southern Alberta population is in decline but the larger northern population appears stable. Reasons for the decline are not clear, but speculation includes increased recreational activity on breeding lakes (leading to nest abandonment), combined with duckling predation from increasing populations of California gulls. Pollution at wintering grounds on the coast may also have an effect. A management plan is scheduled for completion in 2008.

WAYNE LYNCH

WOLVERINE

WOLVERINE [DATA DEFICIENT]

Management Lead: **Lisa Wilkinson**

The wolverine (*Gulo gulo*) was designated as a data deficient species in 2001. This species has experienced considerable range reduction and population decline across North America since the arrival of Europeans. The COSEWIC has listed the species as endangered in the eastern portion of its distribution, and special concern throughout the west. The wolverine has a naturally low reproductive rate, low juvenile survivorship, and requires a large and variable home range based on food availability and habitat structure, and therefore has a naturally low population size. Little information is available on the wolverine population in Alberta. Inventories are required to collect data on the population and distribution of this species to provide data for an evaluation of its status in the province.

The Fish and Wildlife Division initiated a pilot wolverine inventory project in 2001, using bait stations to collect hair samples. This project has since been adopted and expanded by the Alberta Research Council. Methods now involve both remote cameras and hair capture. Inventory has been conducted in the Grande Cache area, and in winter 2006-2007, an inventory was conducted in the Wilmore Wilderness park in partnership with Alberta Parks and Protected Areas.

ELEVEN SPECIES

EVALUATED BY THE ENDANGERED SPECIES CONSERVATION COMMITTEE

JUNE 2004 – JUNE 2006

GORDON COURT

E N D A N G E R E D

BURROWING OWL *(Athene cunicularia)*

DESCRIPTION

The burrowing owl is a small owl, similar in size to a pigeon. It has a round head, mottled brown and white plumage on its back, horizontal barring on its underside, and long legs. The burrowing owl is migratory and arrives in Alberta in April or May. This species breeds in the province between April and September. It nests in an unoccupied burrow of a ground squirrel, badger or fox, and is usually seen on the dirt mound close to its nesting burrow, or on a nearby fencepost. Nesting pairs sometimes form loose colonies, but colonies in Alberta usually include no more than five pairs. Clutch size typically ranges from 6 to 12 eggs. Incubation lasts about one month and newly hatched owls are dependent on their parents for food until approximately 6 to 8 weeks of age. Family groups may stay together until shortly before migration.

Food for burrowing owls includes insects (usually grasshoppers, beetles and crickets), small rodents (mice and voles), birds, frogs, toads, salamanders and snakes. Unlike most other owls that are active only at night, burrowing owls are active both day and night.

Habitat

The burrowing owl is found in the Mixed-Grass and Dry Mixed-Grass Natural Subregions of the Grasslands Natural Region in southeastern Alberta. Breeding habitat for burrowing owls is treeless grassland with sparse vegetation, such as that grazed by livestock. Burrows excavated by Richardson's ground squirrels (*Spermophilus richardsonii*) or badgers (*Taxidea taxus*) are required for nesting and shelter. In contrast to this species' breeding habitat, owls typically forage over areas of tall, dense vegetation, such as that found in low-lying ephemeral wetland areas, uncultivated areas, or roadside ditches. These areas tend to support the highest densities of small mammals.

Distribution

Burrowing owls occur across the grasslands of western North America and portions of Central and South America. In Canada, the remaining populations of burrowing owls mainly occupy southern Alberta and Saskatchewan, with a remnant population in the southern interior of British Columbia. The species has effectively been extirpated in Manitoba. In Alberta, the species was historically common in the Northern Fescue Subregion and southern Aspen Parkland of Alberta, but it is now only found sporadically in these areas. Canadian birds winter in the southwestern United States and Mexico.

Population

The Alberta population of burrowing owls is declining dramatically. The population is estimated to have declined from more than 1 500 pairs in 1978, to approximately 1000 in 1990, 842 in 1994-1995, and 300 in 2004. This represents an estimated decline of 80% over 26 years, and 64% over the past 10 years. Similar declines have occurred in the rest of its Canadian range and in many areas in the United States.

Threats

Suitable grassland habitat was converted for cultivation at a high rate between 1976 and 1986, and remaining habitat was highly fragmented by oil and gas activity and road construction. Habitat loss, fragmentation and degradation from intense agricultural development and urban sprawl represent the most pressing threats to burrowing owls. Availability of suitable nesting burrows, dispersal ability within a fragmented habitat, and prey and predator distribution and abundance, are all potentially affected by habitat loss and degradation.

Management

This species is currently listed as an endangered species under Alberta's *Wildlife Act*, making it illegal to kill or harass burrowing owls or to disturb their nests. A national recovery plan for this species has been in place since 1995 and a provincial recovery plan was finalized and adopted in 2005. Recovery efforts have not been successful at stopping the decline in population size or identifying the factors responsible for the decline. In 2006, the ESCC re-evaluated the status of this species and recommended it be moved from threatened to endangered. Continued action to recover the population should include inventories of population size and nest sites, identification, restoration and protection of important habitats, development of best management practices for habitat used by owls, research on thresholds and cumulative effects of identified limiting factors, and educational and stewardship programs targeted towards affected stakeholders including landowners, lessees, and industrial developers.

STATUS

Alberta: Up-listed from threatened to endangered (status re-evaluated and recommended in 2006)
Saskatchewan, Manitoba, British Columbia: Endangered

Canada (COSEWIC): Endangered
U.S.: N4B, N4N
Global: G4

FERRUGINOUS HAWK *(Buteo regalis)*

Habitat

Ferruginous hawks occur in open, relatively undisturbed native grasslands. Isolated trees or some other elevated structure are typically required for nesting. Hawks may do well in grazed areas, but avoid areas with greater than 30% cultivation. Hawks also prefer areas with high ground squirrel populations and areas with low levels of human disturbance.

Distribution

Ferruginous hawks occur primarily in western North America from the Canadian prairies south to New Mexico and Texas. In Alberta, ferruginous hawks occur in the southeast corner of the province. A comparison of this species' current range in the province to its historical range indicates that its range has contracted by about 40% to the southeast. The majority of ferruginous hawks that breed in Alberta winter in Texas.

Population

There is evidence that the population of ferruginous hawks has declined across its current range in Alberta. Coordinated surveys conducted in Alberta in 1982, 1987, 1992, 2000, and 2005, indicate a sharp decrease from an estimated 1 791 pairs in 1987, to 618 pairs in 2005. This is equivalent to a decline of 65% over 18 years. This decline may be related to ground squirrel abundance, as a similar decline in the number of ground squirrels occurred during that same time period.

Threats

Activities that result in the reduction or alteration of the remaining grassland habitat used by ferruginous hawks pose significant threats to this species. These include cultivation of grassland, human settlement and oil and gas activity. The practice of suppressing fires across the prairies has allowed woodlots to expand and replace grassland habitat, and has resulted in increased competition from woodland hawk species. Although the establishment of entire woodlots pose risks to hawks, birds require some tall trees or some other nesting structures. Overgrazing by cattle could hinder all shrub and tree establishment, limiting the availability of nesting structures. Ferruginous hawks are extremely sensitive to disturbance, particularly during nesting, and human activity during this period may result in nest abandonment. Chemical ground squirrel/small mammal control could decrease prey availability for this species and may result in accidental poisonings of hawks that consume the poisoned animals.

Management

This species is currently listed as an endangered species under Alberta's *Wildlife Act*, making it illegal to kill or harass ferruginous hawks or to disturb their nests. A provincial recovery team will be formed to set goals, objectives, strategies and management actions needed to guide recovery for this species over the next five years. This plan will include representation from a diverse set of affected stakeholders. Initial conservation efforts should include the promotion of pre-development inventories for industrial developments and contact with landowners and land managers to facilitate voluntary conservation and stewardship of habitat.

In 2006, the ESCC re-evaluated the status of this species and recommended it be moved from threatened to endangered. Past management of ferruginous hawks in Alberta has focused on providing safe nesting sites in areas of open uncultivated grassland where food is readily available. Tall nest poles or baskets placed in trees have been used successfully by breeding pairs. Recently, management has focussed on structured surveys of ferruginous hawks and ground squirrels and analyses to determining suitable habitat for hawks. Large-scale habitat stewardship programs across the grasslands, such as the Multiple Species at Risk in the Milk River Basin program, promote beneficial habitat management practices that will benefit this species.

DESCRIPTION

The ferruginous hawk is the largest soaring hawk in North America, with a wingspan of up to 135 cm. Most ferruginous hawks in Alberta are light-coloured with rusty "ferruginous" brown on their shoulders, back, rump, and legs. In flight, their legs look like a dark 'V' against their white underparts. There is also a less common dark phase. In both phases, the underside of the tail is grey and is unbanded.

Hawks arrive in Alberta in late March to early April. Pairing takes place prior to or soon after arrival. Nests of twigs and roots are constructed on structures such as trees, abandoned farmsteads, cliff ledges, or, less commonly, on level ground. After hatching, males provide most of the food to nestlings. Birds fledge at 5 to 6 weeks, and fledglings and adults generally remain near the nest for several weeks. Each year individual birds return to the same nesting area and often, the same nest.

Ground squirrels (particularly *Spermophilus richardsonii*) make up nearly 90% of the diet of ferruginous hawks in Alberta. While raising young, one pair of ferruginous hawks consumes an average of 480 ground squirrels. As a result of this reliance on ground squirrels, ferruginous hawks are extremely beneficial to landholders by removing large numbers of ground squirrels without the dangers associated with pesticides or other chemical control methods.

STATUS

Alberta: Up-listed from threatened to endangered; recommended in 2006
Saskatchewan: At risk
Manitoba: Threatened
British Columbia, Ontario: Accidental

Canada (COSEWIC): Special concern; a status re-evaluation is in process
U.S.: N4B, N4N
Global: G4

WAYNE LYNCH

DESCRIPTION

E N D A N G E R E D

MOUNTAIN SHORT-HORNED LIZARD *(Phrynosoma hernandesi)*

The mountain short-horned lizard is the only native species of lizard in Alberta. Its body is round and flat with short spikes on its back and tail, and short legs. Because of this species' round and squat body form, it exhibits a gait similar to a toad's waddling walk - an attribute that has resulted in horned lizards commonly being called "horny toads." Camouflage is this species' primary means of predator evasion, and its mottled, sandy colouration and spiny skin allow it to blend in very well with the dry substrates it inhabits. The species is relatively small: females weigh about 18 g, with a snout-to-vent length (body length excluding the tail) of about 7 cm; males are about 10 g with snout-to-vent lengths of about 5 cm.

Mountain short-horned lizards in Alberta emerge around mid- to late April or early May, and are active until mid-September when they burrow underground for the winter. In Alberta, mating occurs in mid- to late May. Females produce one clutch of young annually, beginning in their second year; males mature in their first year. Females give birth to 6 to 13 live young near the end of July. Survival of the young is low, in part because of their extremely small size at birth (less than 1 g), which makes them vulnerable to predation.

Habitat

Mountain short-horned lizards typically inhabit sparsely vegetated, south facing slopes along coulees and canyons. The rotund shape and short legs of this species would seem to render travel through thick vegetation difficult; however, vegetation is an important part of their habitat, and females in particular readily use vegetation as a source of shade and overnight thermal cover. Short-horned lizards overwinter underground on south-facing slopes in fine, dry soils that allow them to burrow.

Distribution

The species is distributed across dry regions of west-central North America from the southern Canadian prairies south through the western interior United States to Mexico. In Canada, mountain short-horned lizards occur only in extreme southwestern Saskatchewan and southeastern Alberta. Lizards have been recorded in five main areas in Alberta: along the South Saskatchewan River, the Chin Coulee/Forty Mile Coulee region, the Manyberries "badlands," the Milk River, and in the tributaries of the Milk River near the Onefour Agriculture and Agri-Food Research Substation. Within these areas, there are several isolated subpopulations.

Population

The Alberta population of lizards is described as "low." Based on 2001-2002 surveys, a rough population estimate ranged from 4 051 to 24 305 mature individuals. The population likely fluctuates to an unknown extent. The largest subpopulation, in the Manyberries badlands, is estimated to contain nearly one-third of the Alberta population. This area, in particular, has been subject to a large amount of industrial activity.

Threats

The general area occupied by lizards in Alberta is mainly public land leased for cattle grazing. Although grazing animals could trample lizards or their habitats, the specific habitat types used by lizards (i.e., sparsely-vegetated coulee slopes) are avoided by cattle. Some grazing could actually be beneficial to lizards if cattle help prevent vegetation encroachment. The most significant threat to lizards is oil and gas development and exploration. These activities have occurred extensively across southeastern Alberta and continue to pose a threat to lizards and their habitat by reducing or fragmenting suitable habitat, or possibly by increasing erosion of these disturbed areas. Associated access roads and traffic may result in vehicle mortalities or may increase access to animals that prey upon lizards. Recent and future proposals to mine ammonite (a semi-precious stone) and humate (precursor to coal) in the Manyberries badlands could pose similar risks to the lizard population.

Management

This species is listed as endangered under Alberta's *Wildlife Act*, making it illegal to kill, harm, posses, buy or sell individuals in Alberta.

A provincial recovery plan will be prepared to set goals, objectives, strategies and management actions needed to guide recovery for this species over the next five years. The recovery team will include representation from a broad diversity of affected stakeholders. In the interim, the ESCC recommended that Alberta Sustainable Resource Development enhance programs to initiate standardized surveys of distribution and abundance, including searches of adjacent habitats. Studies should investigate population trends, accurately quantify habitat and assess habitat connectivity.

Most of the lizard habitat in the Manyberries badlands currently receives some level of protection by a provincial protective notation (PNT) held by the Lands Division and Forests Division. This notation restricts new industrial activities in habitat considered sensitive to erosion, and applies to eroded slope, badland juniper, and badland riparian habitat types. Because these habitat types are used by short-horned lizards, the PNT may help prevent or mitigate negative effects of industrial activity on this species at this location.

STATUS

Alberta: Endangered; recommended in 2006
Saskatchewan: At risk
Canada (COSEWIC): Designated special concern in April 1992; as of printing of this report, designated endangered April 2007 based on an update status report.

U.S.: N5
Global: G5

TINY CRYPTANTHE *(Cryptantha minima)*

Habitat

The tiny cryptanthe occurs in native grasslands in poorly developed sandy soils with varying amounts of silt. The species prefers areas with a small proportion of exposed soil and some level of animal disturbance. This habitat is limited in Alberta, and is dependent on a natural disturbance regime. The species often occurs in meander lobes of valley bottoms, which have largely been converted to cultivation and settlement. Recently, the species has also been found in sandy upland habitat near valley edges.

Distribution

The tiny cryptanthe occurs sporadically across the Great Plains of North America. In the United States it occurs in nine states, from Montana to central Texas, and its range extends into Mexico. At the time of the Endangered Species Conservation Committee review of this species, in Canada the tiny cryptanthe was known from one site in southwestern Saskatchewan and at 18 sites in southeastern Alberta. Since that time, several more sites have been found in both provinces. In Alberta, most occurrences of tiny cryptanthe occur along the South Saskatchewan River valley from Medicine Hat east to the Saskatchewan border. Additionally, several sites are now known to occur along the lower Bow River valley.

Population

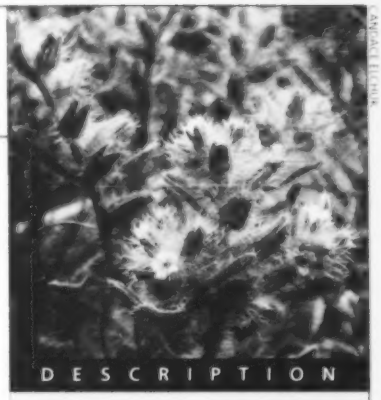
The size of the Alberta population of tiny cryptanthe is not known. The population appears to fluctuate widely from year to year, and survey effort has been inconsistent, making it difficult to estimate population size and trends difficult. Counts at single sites have varied from zero to several hundred plants; single counts or estimates have only rarely exceeded 1 000 plants. In 2004, the largest subpopulation, in Medicine Hat, was estimated at 50 000 plants; residential development resulted in the removal of a large, uncounted portion of the subpopulation. An unknown proportion of the potential population exists at any one time as seeds, dormant in the soil.

Threats

The greatest threat to this species is loss of native grassland habitat from industrial, residential, and agricultural development. Cultivation has already occurred in at least one area that supported tiny cryptanthe and residential development at the site in Medicine Hat has eliminated a large portion of the cryptanthe population. Changes in flood patterns, sand dune stabilization, and major alteration in the frequency and extent of animal disturbance in this species' habitat would likely have detrimental effects on this species.

Management

A provincial recovery team, with representation from affected stakeholders, will be formed to set goals, objectives, and strategies that will guide recovery of this species over the next five years. In the interim, initial conservation efforts will focus on the identification and conservation of existing populations, facilitated through contact with landowners and cooperative management. Alberta Sustainable Resource Development and the Canadian Wildlife Service have been working with the City of Medicine Hat to mitigate the risk of ongoing residential development. A national recovery strategy for this species was completed in fall 2006 and is available online on the federal *Species at Risk Act* Public Registry.



DESCRIPTION

The tiny cryptanthe is an annual plant in the borage family (Boraginaceae). This species can grow to a height of 20 cm. It has a bristly-haired stem that branches near the base of the plant. Spatula-shaped leaves are also bristly and occur alternately along the branches. The species is also known as "little cat's eye" from the appearance of its small tube-shaped flowers with white petals and yellow centres ("eyes"). In Alberta, flowering occurs during late June and early July. Little is known about the pollination of this species. Fruits occur as four white nutlets (seeds) and mature in late July or early August. Most of the seeds fall close to the parent plant, but some may be dispersed by wind, water, or animals.

STATUS

Alberta: Endangered; recommended in 2004
Saskatchewan: Endangered
Canada (COSEWIC): Endangered; on Schedule 1 of the *Species at Risk Act*

U.S.: NNR
Global: G5

BARRED OWL *(Strix varia)*

GORDON COURT

DESCRIPTION

The barred owl is a medium-sized owl with bars of white and grey-brown plumage running horizontally on its chest and vertically on its belly. It has a rounded head, dark brown eyes, white facial discs, a yellow beak, and lacks ear tufts. Females are larger than males, but have similar plumage. Primarily during the breeding season, owls can be heard using a distinctive call that has been described as "Who cooks for you, who cooks for you all?"

Barred owls begin to breed in their second year, and breeding pairs are presumed to be monogamous. Nesting begins in late winter and early spring. Females generally lay only one clutch of 2 to 3 eggs annually. Young leave the nest cavity at 4 to 5 weeks old, but continue to be fed by their parents for several weeks. Juveniles remain with the family group for several months before dispersing short distances from their parents.

Habitat

The barred owl is found primarily in old growth, mixedwood forests. These forests provide a high density of dead, large-diameter hollow snags of balsam poplar (*Populus balsamifera*) and aspen (*P. tremuloides*), which are used as nesting cavities for breeding owls. In Alberta such trees are generally over 120 years old. When not occupying the nest cavity, owls prefer coniferous species such as white spruce (*Picea glauca*) and balsam fir (*Abies balsamea*) for protective cover.

Distribution

The barred owl is widely distributed across North America and its range appears to be expanding further westward in both Canada and the United States. There is also an isolated population of barred owls in Mexico. In Alberta, the barred owl is sparsely distributed across the province, but may be locally common where suitable habitat is available.

Population

The size of the Alberta population of the barred owl is not known; however, based on the results of structured owl surveys, the species is considered to be relatively rare and likely exceeds 1 000 individuals. In comparison, great horned owls (*Bubo virginianus*) and northern saw-whet owls (*Aegolius acadicus*) are both about ten times more common than the barred owl. There is evidence for short-term population declines of this species, particularly in intensively managed forests. Populations do not appear to fluctuate appreciably in undisturbed locations. The Alberta population of the barred owl is expected to decline in the future under current forest harvesting practices.

Threats

The largest threat to the barred owl in Alberta is the loss and fragmentation of old growth forests from forestry, oil and gas development, and the cumulative effects of these and other land use activities. Current forest harvesting operating guidelines in Alberta require that the oldest stands be harvested first. In addition, current forest practices permit harvesting of re-grown aspen-dominated stands at the age of 70 years. These policies will continue to reduce the amount of habitat available for this species, as it takes a minimum of 100 years for trees to reach the necessary size (diameter) to provide nesting habitat for barred owls. Presently, riparian buffer strips, where logging is not permitted, provide the greatest source of potential nesting habitat for barred owls in the managed forests of Alberta. Proposals to allow harvesting within protective buffers beside watercourses threaten the persistence of this species in the province. Ongoing reduction in old growth forest will result in fewer potential nesting sites, younger and more fragmented forests, and increased competition and predation by great horned owls.

Management

At present, the barred owl is protected as a "bird of prey" under Alberta's *Wildlife Act*. A management strategy will be prepared for this species and will emphasize the need for monitoring of population size and trends to enable making a population estimate of barred owls in the province. A number of ongoing surveys provide data on distribution and abundance of barred owls in Alberta, including Bird Studies Canada's Alberta Nocturnal Owl Survey, Breeding Bird Survey, May Species Count, Edmonton Owl Prowl and Alberta Owl Prowl. A habitat supply analysis also needs to be conducted for this species across its provincial range to project and estimate future trends in habitat availability. Harvest limits for old-growth forest set by the Forest Management Plan need to incorporate habitat requirements of barred owls. Proposals to allow harvesting within riparian buffer strips, which are likely to remain the greatest source of nesting habitat for barred owls in the future, should be evaluated in consideration of the habitat needs of this, and other, old-growth-dependent species.

STATUS

Alberta: Species of special concern; recommended in 2005
British Columbia, Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island: Secure
Manitoba: Sensitive
Saskatchewan: May be at risk
Newfoundland, Northwest Territory: Undetermined
Canada: N5
U.S.: N5
Global: G5

WESTERN GREBE *(Aechmophorus occidentalis)*

ROYAL ALBERTA MUSEUM

Habitat

Breeding habitat for western grebes consists of medium to large, relatively deep lakes with stable water levels that support fish populations, sufficiently long ice-free period for vegetation growth and all nesting phases, large beds of emergent vegetation for nesting, protection from wind and wave action, sufficient depth at nest site for diving (at least 25 cm), and lack of human disturbance.

Distribution

The western grebe breeds from south-central British Columbia east through central Saskatchewan and southwestern Manitoba, central Minnesota and Wisconsin, and south through the western United States to northwest Texas and west to California. This species winters along the Pacific coast from southeastern Alaska to central Mexico. In Alberta, its distribution is widespread but the species is not common. It is most abundant in the Boreal Forest, Parkland, and Grassland natural regions south of 56°N.

Population

The population size of western grebes in Alberta exceeds 13 000 breeding birds. The population has experienced significant declines in the past; 11 of 29 historical breeding colonies across Alberta have been lost and significant declines have occurred at several of the remaining locations (up to 70% decrease in colony size). Furthermore, in central and northeastern Alberta there have been declines since 2001. The estimated total population in the Stony Plain area (which contains about 9% of the provincial population) decreased by 57% from 2001-2005; further decline is expected after at least 333 western grebes were directly killed by the oil spill at Wabamun Lake in 2005. Evidence also suggests decline in the northeast portion of the breeding range (which contains about 50% of the provincial population), where the second largest colony in the area decreased in size dramatically (about 70%) from 2003-2005. While local populations appear to be increasing in Lesser Slave and Utikuma lakes, it is uncertain whether or not this apparent population increase has resulted from improved sampling techniques.

Threats

Habitat degradation is a major threat to the western grebe. Shoreline development, draining of wetlands, recreational boating, manipulation of water levels, cattle grazing, and recreational vehicle activity during the winter all contribute to habitat degradation. Western grebes are also highly sensitive to human disturbances such as recreational boating, water-skiing, and personal watercraft use. Areas with frequent human disturbance have high rates of nest abandonment and low reproductive success, and even minor disturbance can result in increased predation at nests. The colonial behavior of western grebes makes them highly vulnerable to catastrophic events by concentrating them into very limited areas within a small number of lakes. In addition, only seven lakes support more than 1 000 birds. For these reasons, they are particularly vulnerable to events such as the oil spill in Wabamun Lake in August 2005, which reduced one of the province's largest populations by at least 69%. Other threats include pollution and changes in forage fish populations

Management

The western grebe is ranked as sensitive according to the *General Status of Alberta Wild Species 2005*. Management of this species to date has focused on educational awareness campaigns and protection of breeding habitat. Continued monitoring of known breeding sites is essential for tracking population trends of this species.

DESCRIPTION

The western grebe is a colonial waterbird. It is the largest of all North American grebes and measures approximately 64 cm in length and weighs up to 1.8 kg. It has a long neck, black and white coloration, red eyes, and a sharp bill. Its call is a plaintive, high-pitched "creek-creek." Grebes mainly eat fish that are captured by diving.

Western grebes breed in late April or May, shortly after arriving from wintering grounds. The species exhibits elaborate courtship dances that include calls, gestures, and synchronized rushes. Birds generally breed annually and nesting peaks in June. Western grebes nest in colonies of tens to hundreds of nests. Nests are floating and are constructed of emergent vegetation along the margins of lakes. Both sexes participate in nest building, incubation (3 to 4 weeks) and chick rearing. In Alberta, brood size averages 1 to 4 young. Young leave the nest within hours of hatching, and are raised in open water on their parents' backs. Young fledge at 49 to 51 days and juveniles become independent at 63 to 77 days. In Alberta, birds usually depart for their wintering grounds by October.

STATUS

Alberta: Species of special concern; status recommended in 2006)
British Columbia: May be at risk
Saskatchewan, Manitoba: Secure
Ontario, New Brunswick, Nova Scotia, Yukon Territory: Accidental
Canada: Secure
U.S.: N5B, N5N
Global: G5

MARK STUMPHUBER, COURTESY OF THE ROYAL ALBERTA MUSEUM, EDMONTON, ALBERTA

ARCTIC GRAYLING *(Thymallus arcticus)*

DESCRIPTION

The arctic grayling is in the trout family (Salmonidae), and is one of the most colourful fish species in Alberta. Grayling have silvery-grey to dark blue sides with a blue-green iridescence and V- or diamond-shaped markings. The species has a trout-like body, a short, olive-green head, small mouth, green-gold eyes, and a deeply-forked tail. Its most distinguishing feature is the large, sail-like dorsal fin on its back. This fin is black with vertical bars of spots that range in colour across the fin from orange-red to iridescent blue-green. This fin is larger and more brilliantly coloured in males.

In Alberta, spawning generally occurs in late April or early May. Males swim into small tributaries and set up territories that they defend from other males using their bright dorsal fins. Neither males nor females dig redds (nests). Females spawn between 5 000 and 6 000 eggs per 0.5 kg of body weight, which is considerably more than other trout or salmon species. Eggs are fertilized as they drop into the water then fall to the gravel below. Eggs hatch after about 15 days. Young-of-the-year often remain in natal streams for one-and-a-half years before moving downstream into larger streams. Most arctic grayling mature at between three and four years of age and most Alberta populations do not contain fish older than six or seven years. After spawning, adults will most often leave the tributaries and move downstream.

Habitat

The arctic grayling occupies large rivers and their tributaries in the Athabasca, Peace, and Hay river watersheds. This species may occupy flowing water of moderate gradient that remains cool and clear, or clear, tannin-stained (brown) rivers that drain northern muskegs.

Graylings typically show seasonal movements between spawning, feeding and overwintering areas. Small tributaries are used by adult graylings to spawn, slow-moving tributary margins and side channels are used by newly emerged fry, shallow riffles and runs are used by older fry and juveniles, and deeper pools and runs are used by adults (post-spawning) and larger juveniles. Deep pools, and sometimes beaver ponds, are used for overwintering.

Distribution

The species' global distribution is Holarctic; within North America it occurs in drainages from Hudson Bay to Alaska, including the Northwest Territories, Yukon, Nunavut, and northern areas of British Columbia, Alberta, Saskatchewan and Manitoba. In Alberta, this species occurs in the Athabasca, Peace, and Hay River drainages.

Population

The Alberta population appears to have undergone a dramatic historical decline. Approximately 50% of subpopulations may have declined up to 90% in abundance between the 1950s and 1970s. This decline resulted in a range contraction of about 40% of the species' historical range. Recent sampling in northeastern Alberta indicates low densities of grayling in rivers with relatively high human access. Populations may also show large natural fluctuations, possibly due in part to high mortality caused by warm water temperatures in Alberta. At present, the number of mature individuals in Alberta is unknown, but certainly exceeds 1 000. Past and continuing decline in habitat quality and increased levels of exploitation suggest a future population decline for this species; however, data are not currently sufficient to determine the magnitude of the potential decline.

Threats

There are several potential threats to arctic graylings in Alberta. Habitat fragmentation from road construction and culverts poses a major threat to this species by preventing fish from moving between different habitats to spawn, feed, and overwinter. A 2003 study of 302 stream crossings in the Hinton area showed that 61 crossings were potentially partial or full barriers to fish movement. Cumulative changes to stream flow, temperature, nutrient inputs and siltation associated with oil and gas development, agriculture, and forestry and associated road and installation networks have the potential to affect populations negatively. Overharvesting may also pose a threat, even under low angling pressure, because grayling are more easily caught than most other Alberta stream fishes. Grayling habitat in Alberta has high temperature and flow variability, which can increase grayling mortality.

Management

The arctic grayling is managed and protected as a game fish in Alberta. A conservation and management plan will be developed for this species that will integrate and build upon Alberta's Arctic Grayling Management and Recovery Plan. This management plan should include recommendations to evaluate the need for site-specific angling regulation changes, undertake long-term monitoring of population abundance and structure, investigate overwintering behaviour of graylings, identify areas for temporary water withdrawal permits that would be unlikely to aggravate the security of pool refugia for arctic graylings, carry out routine monitoring of total cumulative harvest rates, continue multi-year studies on spawning characteristics of grayling, and continue with development of a program to restore connectivity and prevent future habitat fragmentation.

STATUS

Alberta: Species of special concern; recommended in 2006
British Columbia (except Williston watershed), Saskatchewan, Manitoba, Yukon Territory: Secure
British Columbia (Williston watershed): S1
Northwest Territory, Nunavut: Sensitive
Canada: Secure; on the COSEWIC candidate list of species for assessment (October 24, 2006)
U.S.: N5
Global: G5

WESTERN BLUE FLAG *(Iris missouriensis)*

Habitat

The western blue flag grows in damp, sunny meadows where the soil is moist in the spring, but dries out late in the summer. In Alberta it is typically found on flat terrain, or on slight slopes that remain wet for most of the growing season. Many of these plants are found near willow thickets around depressions and drainages; however, some sites are on dry upland areas of rough fescue (*Festuca scabrella*) communities.

Distribution

In Canada, the western blue flag is found only in the extreme southwestern corner of Alberta. This species is at the northern edge of its distribution in Alberta; many healthy populations exist across the western United States. In Alberta, blue flag occurs at 18 sites (13 subpopulations) between Cardston and the U.S. border. Nine of these populations are presumed native. The origin of the remaining four subpopulations is unknown.

Population

In 1989, the size of the population was estimated to be fewer than 10 000 plants. Increased cooperation by landowners and increased public interest in this species from conservation and management activities has resulted in the identification of several previously unidentified populations, and has led to an approximate 10-fold increase in the known population size of this species in the province. Currently, the population of the western blue flag in Alberta is estimated to be 83 000 stems. This new estimate of population size has led to this species being downlisted from threatened to species of special concern.

Threats

Human activities such as alteration of drainage patterns, water diversion, cultivation, overgrazing, and herbicide use can damage habitat for this species and destroy plants. However, this species does benefit from light to moderate livestock grazing. Other limiting factors include competition from native and invasive species and the collection of plants for horticultural and medicinal uses.

Management

A provincial recovery plan has been in place for this species since 2002 as a result of its initial evaluation and designation as threatened. The plan focus is on cooperative, voluntary, stewardship agreements with landowners, coordinated through the Western Blue Flag Conservation Program. Implementation of stewardship activities for western blue flag led to increased public interest and cooperation with the recovery program. As a result, information on previously unrecorded populations of this species was supplied to the recovery team, leading to a considerable increase in the species' known population size. This program is ongoing as a component of the Multiple Species at Risk (MULTISAR) program.

BRUCE GOULD

DESCRIPTION

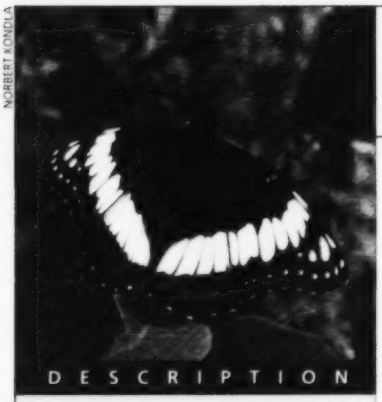
The western blue flag is a member of the Iris family (Iridaceae). It is a long-lived perennial that grows from a thick underground stem (rhizome). Plants grow 30-60 cm tall, with long, sword-like leaves. Flowers are generally pale blue or blue-violet, with purple veins radiating from a yellow spot on each of the outer petals. There is also a less common white-flowered form.

The plant reproduces by seed and also asexually from rhizomes. Light to moderate grazing appears to enhance the spread of this plant, but heavy grazing is detrimental. The species flowers from mid-June to early July, and bees are its main pollinators. The seed capsule is oblong, and contains round, dark brown seeds. Seeds drop to the ground near the parent plant, or are dispersed by wind or water. Seeds require 2 to 3 months to germinate and plants produce flowers in their second or third year.

STATUS

Alberta: Downlisted from threatened to special concern (status re-evaluated and recommended in 2005)
Canada (COSEWIC): Threatened; on Schedule 1 of the *Species at Risk Act*

U.S.: N5?
Global: G5



NORBERT KONDLA

DESCRIPTION

WEIDEMEYER'S ADMIRAL *(Limenitis weidemeyerii)*

The Weidemeyer's admiral is a large butterfly with a wingspan of 55 to 72 mm. It is mostly black with bold white bands on both wing surfaces, and with bluish markings and faint red spots on the underside of the hind wings. This species has a typical lepidopteran life cycle of egg, larva (caterpillar), pupa, adult. The caterpillars of this species are either olive-green with a yellowish-tan thorax (the segment behind the head), or greyish and mottled with grey and white patches; the head is red-brown.

In Alberta, adult admirals have been observed from mid-June to mid-July. Males may be territorial and engage in aerial contests. Males locate females by patrolling or by perching and waiting for females to pass by. Females spend much of their time in shrubs and are seen less frequently than males. In Alberta, they lay eggs on the upper side of the leaf tips of saskatoon (*Amelanchier anilfolia*), and possibly other woody plants. Once emerged, caterpillars forage on the leaves of taller shrubs and trees before they hibernate for the winter, and then pupate and emerge as adults the following summer. Adults get moisture and nutrients from tree sap, flower nectar, carrion and mud.

Habitat

The Weidemeyer's admiral is found in woody riparian habitats that are naturally patchy on the prairie landscape in southern Alberta. The butterflies are typically associated with deciduous treed and shrubby areas that contain larval food (saskatoon), shelter from strong wind, flowering plants, and damp soil/mud. In Alberta, butterflies have been located in three distinct habitat types, including riparian forest and shrubbery along the Milk River valley bottom, pockets of trees and shrubs along a few tributary coulees and ravines, and small patches of chokecherry (*Prunus virginiana*)/saskatoon in some coulees and ravines.

Distribution

Most of this species' range is found in the western interior of the United States, and its range extends only into the extreme south of Alberta. Known locations of this species in Alberta are clustered into western and eastern assemblages along an approximately 80-km stretch of the lower Milk River, tributary coulees, and the extreme lower Lost River Valley. Within each of these clusters are several populations connected by dispersing individuals. Adults can easily fly between patches within their coulee shrub breeding habitat, but probably not easily through other habitat types. The number of locations is currently unknown.

Population

The adult population in Alberta is estimated at between 1 800 and 3 200 individuals, based on the number of individuals per linear kilometer of habitat. There is no information available on population trends or fluctuations, although it is believed that this species could experience substantial fluctuations from year to year as has been observed in other butterfly populations in Alberta.

Threats

There are no imminent threats to the Alberta population of Weidemeyer's admiral. The primary limiting factor is the small area of habitat available to the species. Land use intensity in the Alberta range of this species has remained relatively stable over the past 30 years, and human activities are not known to have had measurable effects on the Alberta population. However, potential changes such as large development projects (e.g., dam construction), or increased livestock grazing intensity, could threaten the persistence of the species.

Management

A provincial management plan for this species will be prepared that will integrate with programs currently underway in the Milk River basin, such as the Multiple Species at Risk (MULTISAR) program and Operation Grassland Community. The management plan should highlight the need for regular population surveys of known populations to refine the population estimate, and to determine the existence of any population trends or fluctuations, which will help to refine the provincial status. Additional survey effort, focussed in the areas between and adjacent to the two assemblages where butterflies are known to occur, is also required to determine the full distribution of this species in Alberta.

STATUS

Alberta: Species of special concern; recommended in 2006
Ontario: Accidental
Canada (COSEWIC): Special concern; on Schedule 1 of the *Species at Risk Act*

U.S.: N5
Global: G5

D A T A D E F I C I E N T

SLENDER MOUSE-EAR CRESS *(Halimolobos virgata)*

Habitat

The slender mouse-ear cress occurs on lightly disturbed, gently rolling prairie on sand plains and open sage thickets of river slopes and basins. Sandy, alkaline soils are preferred. The species appears to be able to withstand and may even require light disturbance from grazing. The species does not appear to be able to tolerate intense competition from aggressive, invasive plant species. Associated species include a variety of native grasses and other herbaceous plants, such as silver sagebrush (*Artemisia cana*).

Distribution

The slender mouse-ear cress occurs only in western North America. It occurs in seven states in the United States including, Montana, Idaho, Wyoming, Colorado, Utah, Nevada and California. In Canada, the slender mouse-ear cress occurs in southeastern Alberta and southwestern Saskatchewan. The species has been found at eight locations in Alberta, with historical locations at Medicine Hat and Rosedale.

Population

The size of the Alberta population of the slender mouse-ear cress is unknown. Surveys of known sites in Alberta result in total plant counts ranging from zero to less than 100 per year. The population appears to undergo considerable annual fluctuation.

Threats

The main threats to the Alberta population of slender mouse-ear cress are loss and alteration of habitat as a result of industrial development and agricultural activities. At locations where the soil has been heavily disturbed (turned), the species appears to have difficulty re-establishing itself. Other limiting factors include invasion of the species' habitat by non-native species, a lack of grazing pressure resulting in habitat stabilization, and at the other extreme, overgrazing.

Management

The slender mouse-ear cress is ranked as may be at risk according to the *General Status of Alberta Wild Species 2005*. In Alberta, most locations of the slender mouse-ear cress occur on private lands or on provincial lands under grazing disposition. Conservation of the species at these locations will require communication of the species' needs to landholders and land managers, and stewardship activities to protect the species and its habitat. Monitoring of this species at known locations and additional surveys in new areas are necessary to better understand population size, distribution, and population trends. The provincial status of this species should be re-evaluated as soon as more data become available. At the time of this report, a national Recovery Strategy for this species was in development.

CANDACE ECHR

DESCRIPTION

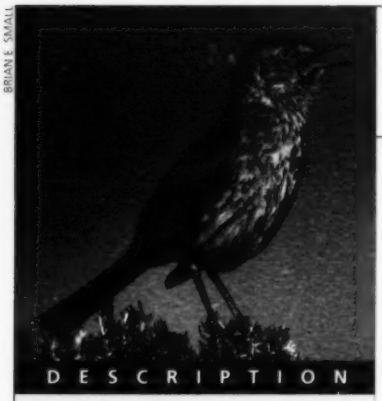
The slender mouse-ear cress is a member of the mustard family (Brassicaceae). One to several simple or branched stems grow 10 to 35 cm high from a dense cluster of leaves (rosette). Flowers have small white petals (3 to 4.5 mm long) with prominent pinkish veins. Plants generally produce flowers for the first time in their second year. In Alberta, the slender mouse-ear cress blooms from May to June. Little is known about the method of pollination of this species in Alberta. Elongated, flattened seed capsules mature by mid-July and contain many seeds. Seeds are wingless and not adapted to long distance dispersal by wind.

STATUS

Alberta: Data Deficient; recommended in 2005
Saskatchewan: Threatened
Canada (COSEWIC): Threatened; on Schedule 1 of the *Species at Risk Act*

U.S.: N3
Global: G4

SAGE THRASHER *(Oreoscoptes montanus)*



DESCRIPTION

The sage thrasher is a medium-sized songbird, slightly smaller than a robin. It is grey-brown in colour, has dark brown stripes on its otherwise light breast and belly, white bars on its wings, and has a shorter bill and tail compared to other thrashers. Its face appears streaked with a whitish eyebrow bar and black streaks on the sides of its throat, and it has yellow to amber eyes. Females and males have similar plumage. The species' song is a long musical series of warbling notes.

In Alberta, these migratory birds arrive in mid to late May and males begin to sing to advertise their breeding territory. Pairs are monogamous, and both males and females contribute to nest building, incubation and care of the young. Bulky nests constructed of twigs, roots, and stems are typically placed well into the interior of a large sagebrush (*Artemisia* spp.), about three feet from the ground, below the thickest part of the plant to provide protection, shelter and shade for the nest; occasionally birds will nest in alternate shrub species. Females usually lay four or five eggs and can raise two broods in one season. There is little information available on incubation and nestling periods in Alberta. Birds migrate to their southern wintering grounds between late August and late September.

Habitat

As its name suggests, the sage thrasher is almost entirely dependent on sagebrush habitat. This species prefers areas dominated by large sagebrush and other shrubs, avoiding dense grass cover, in rangelands that are in good condition. Nesting habitat in Alberta occurs only in the southeastern corner of the province. Based on breeding preferences in other parts of the species' range, the most suitable habitat in Alberta is likely mixed-height sagebrush patches along coulees or riparian areas, where sagebrush can exceed one metre in height.

Distribution

Sage thrashers are at the northern tip of their range in Canada and occur only in south-central British Columbia, southeastern Alberta, and historically in southwestern Saskatchewan. In Alberta, all nests of thrashers have been observed south of Medicine Hat, but transient birds have been recorded as far north as Jasper and Grand Prairie. The majority of the species' breeding range occurs in the United States in parts of Washington, Idaho, and Montana, south through the Great Basin to northern parts of Arizona, New Mexico, Texas and Oklahoma. The species winters in the southern United States, south of their breeding range, through to central Mexico.

Population

Sage thrashers are extremely rare in Alberta; the number of nesting birds in a single year has never been greater than three pairs and varies from year to year. Low numbers of birds and nests may be attributable, in part, to suitable nesting habitat in Alberta being separated by 400 km from the closest breeding population in Montana, and to the highly fragmented nature of sagebrush habitat in Montana.

Threats

The major threats to this species all involve the loss, fragmentation, or degradation of sagebrush habitat. In other areas of this species' range, habitat for sage thrasher has been lost to agricultural conversion, residential development, and degradation of habitat from range management practices including, mowing, burning, removal of shrubs, herbicide and pesticide use, and overgrazing. It is not known how these factors may have affected habitat used by the sage thrasher in Alberta; however, most of the land in the known breeding range of this species in Alberta is used for cattle ranching. Oil and gas development and exploration could also threaten this species through habitat loss and degradation, and linear features such as roads may reduce breeding productivity. Oil and gas activity and agriculture have been implicated as factors responsible for the decline of the Alberta population of sage grouse (*Centrocercus urophasianus*), another sagebrush dependent species.

Management

The species is currently ranked as "undetermined" according to the *General Status of Alberta Wild Species* 2005 because of the lack of information available on population size, trends, and distribution in Alberta. In 2005, the Scientific Subcommittee adopted COSEWIC guidelines for determining a species' eligibility for status assessment. Using these guidelines, it was decided that there was insufficient information at that time to determine whether or not the sage thrasher was eligible for assessment in Alberta - native status could not be determined because of the need for a better definition of regularity and more information on the regularity of occurrence of sage thrasher in Alberta. Surveys for this species will be necessary to provide this information. In the interim, increased awareness by landowners and land managers of this species' needs and voluntary stewardship of its habitat through good rangeland management practices will be important in conserving habitat for sage thrashers in the province.

STATUS

Alberta: Insufficient information to determine eligibility for status assessment in Alberta
British Columbia, Saskatchewan: At risk
Manitoba, Ontario, New Brunswick: Accidental

Canada (COSEWIC): Endangered; on Schedule 1 of the *Species at Risk Act*
U.S.: N5B, N5N
Global: G5

A P P E N D I X

POLICY STATEMENT

for Alberta's Endangered Species Conservation Committee

Alberta's Endangered Species Conservation Committee (ESCC) is comprised of a balance of members from stakeholder groups representing resource-based land users, corporate and government land managers, conservation organizations and university scientists. Our mandate is to advise the Minister of Sustainable Resource Development on matters relating to the identification, conservation and recovery of species at risk in Alberta. We feel these principles are important in a provincial and federal context. We are operating from a core set of principles that include the following:

one | The identification, conservation and recovery of threatened and endangered species, as well as prevention of extinction of species, are shared values of this committee and Albertans in general.

two | The biological status of species should be determined by independent scientists using the best science available in an open and transparent process.

three | In accordance with the precautionary principle as stated in the *Accord for Protection of Species at Risk in Canada*, where the balance of scientific information indicates a species is at risk, conservation and protective measures will be taken.

four | Government has the responsibility to coordinate and facilitate the recovery of species. However, the success of a recovery plan depends on the knowledge and commitment of organizations and individuals who own, manage and use the land. Recovery teams must include these landowners/land managers.

five | Prevention and recovery programs for species at risk will be pursued by encouraging voluntary and cooperative, recovery and management efforts that cost-share on an equitable basis.

six | This committee encourages the elimination of any government policy disincentives to landowners to protect species at risk.

GORDON COURT

THE PEREGRINE FALCON IS MAKING A REMARKABLE COMEBACK IN CANADA. ONCE EXTIRPATED EAST OF THE ROCKY MOUNTAINS AND SOUTH OF THE BOREAL FOREST, THIS SPECIES IS NOW SET TO COME OFF THE LIST OF ENDANGERED AND THREATENED SPECIES IN CANADA. IN ALBERTA, DOWNLISTING WILL BE CONSIDERED WHEN THE PROVINCIAL POPULATION NUMBERS 70 PAIRS; BETWEEN 50 AND 60 PAIRS NOW EXIST.

Alberta Agriculture, Food and Rural Development
www.agric.gov.ab.ca

Alberta Fish and Game Association
www.afga.org

Federation of Alberta Naturalists
www.fanweb.ca

Alberta Association of Municipal Districts and Counties
www.aamdc.com

Alberta Forest Products Association
www.albertaforestproducts.ca

Special Areas Board
www.specialareas.ab.ca

Alberta Beef Producers
www.albertabeef.org

Alberta Irrigation Projects Association
www.aipa.org

The Wildlife Society - Alberta Chapter
www.albertadirectory.com/actws

Alberta Conservation Association
www.ab-conservation.com

Alberta Native Plant Council
www.anpc.ab.ca

Treaty 8 First Nations of Alberta
www.treaty8.org

Alberta Environment
www.environment.gov.ab.ca

Alberta Tourism, Parks, Recreation and Culture
www.tprc.alberta.ca

University of Alberta
Dept. of Biological Sciences
www.biology.ualberta.ca

Alberta Energy
www.energy.gov.ab.ca

Calgary Zoo
www.calgaryzoo.org

University of Calgary
Dept. of Biological Sciences
www.ucalgary.ca/UofC/faculties/SC/BI

Alberta Sustainable Resource Development
www.srd.alberta.ca

Canadian Association of Petroleum Producers
www.capp.ca

Western Stock Growers' Association
www.wsga.ca

REPORT OF ALBERTA'S ENDANGERED SPECIES CONSERVATION COMMITTEE

JUNE 2006